NOTE

This Microfiche meets the quality requirements of the American National Standard for Microfiche of Documents (ANSI PH5.9-1975). However, because of imperfections in the document from which it was made, it contains images that are illegible or difficult to read. The source document for this microfiche is the best copy that could be obtained prior to filming.

CIS

Congressional Information Service, Inc
Washington, D C

S. HRG. 101–804

TELECOMMUNICATIONS EQUIPMENT RESEARCH AND MANUFACTURING COMPETITION ACT

HEARINGS

BEFORE THE

SUBCOMMITTEE ON COMMUNICATIONS

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

ON

S. 1981

TO PERMIT THE BELL TELEPHONE COMPANIES TO CONDUCT RESEARCH ON, DESIGN, AND MANUFACTURE TELECOMMUNICATIONS EQUIPMENT, AND FOR OTHER PURPOSES

APRIL 25 AND MAY 9, 1990

Printed for the use of the Committee on Commerce, Science, and Transportation

U.S. GOVERNMENT PRINTING OFFICE
32–426 O WASHINGTON : 1990

S261-75

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ERNEST F. HOLLINGS, South Carolina, *Chairman*

DANIEL K. INOUYE, Hawaii
WENDELL H. FORD, Kentucky
J. JAMES EXON, Nebraska
ALBERT GORE, JR., Tennessee
JOHN D. ROCKEFELLER IV, West Virginia
LLOYD BENTSEN, Texas
JOHN F. KERRY, Massachusetts
JOHN B. BREAUX, Louisiana
RICHARD H. BRYAN, Nevada
CHARLES S. ROBB, Virginia

JOHN C. DANFORTH, Missouri
BOB PACKWOOD, Oregon
LARRY PRESSLER, South Dakota
TED STEVENS, Alaska
ROBERT W. KASTEN, JR., Wisconsin
JOHN McCAIN, Arizona
CONRAD BURNS, Montana
SLADE GORTON, Washington
TRENT LOTT, Mississippi

KEVIN G. CURTIN, *Chief Counsel and Staff Director*
WALTER B. MCCORMICK, JR., *Minority Chief Counsel and Staff Director*

SUBCOMMITTEE ON COMMUNICATIONS

DANIEL K. INOUYE, Hawaii, *Chairman*

ERNEST F. HOLLINGS, South Carolina
WENDELL H. FORD, Kentucky
ALBERT GORE, JR., Tennessee
J. JAMES EXON, Nebraska
JOHN F. KERRY, Massachusetts
LLOYD BENTSEN, Texas
JOHN B. BREAUX, Louisiana

BOB PACKWOOD, Oregon
LARRY PRESSLER, South Dakota
TED STEVENS, Alaska
JOHN McCAIN, Arizona
CONRAD BURNS, Montana
SLADE GORTON, Washington

CONTENTS

Page
Opening statement by Senator Inouye 1
Opening statement by Senator Stevens 2
Opening statement by Senator Lott 2
Opening statement by the Chairman 3
Opening statement by Senator Breaux 6
Opening statement by Senator Burns 63
Text of S. 1981 7

CHRONOLOGICAL LIST OF WITNESSES

April 25, 1990

Clendenin, John L., chairman, BellSouth Corp 14
  Prepared statement 18
Latham, Dan, director, telecommunications industry marketing, Digital Equipment Corp 163
  Prepared statement 166
Tobias, Randall L., vice chairman, AT&T; accompanied by John D. Zeglis, senior vice president; and Ian M. Ross, president, Bell Laboratories 68
  Prepared statements:
    Mr. Tobias 71
    Mr. Ross 88
    Mr. Zeglis 104

May 9, 1990

Opening statement by the Chairman 183
Opening statement by Senator Burns 184
Opening statement by Senator Pressler 185
Biddle, Stephanie, executive vice president, Computer & Communications Industry Assn 229
  Prepared statement 233
Brackney, Stuart R., director, Arizona Council for the Hearing Impaired 313
  Prepared statement 316
Easterling, Barbara J., executive vice president, Communications Workers of America 289
  Prepared statement 291
Frischkorn, A. R., Jr., president, Telecommunications Indstry Assn 252
  Prepared statement 254
Hilsman, Lt. Gen. William J., president and CEO, International Mobile Machines Corp 227
Kimmelman, Gene, executive director, Consumer Federation of America 301
  Prepared statement 304
Kramer, Albert H., general counsel, North American Telecommunications Assn.; accompanied by Eric Nelson, director of research 322
  Prepared statement 325
Sikes, Hon. Alfred C., Chairman, FCC; accompanied by Richard Firestone, Chief, Common Carrier Bureau 186
  Prepared statement 189
  Questions of Senator Kerry and the answers 205
Wade, Winston J., president, U S WEST Advanced Technologies 212
  Prepared statement 214

ADDITIONAL ARTICLES, LETTERS, AND STATEMENTS

Heflin, Hon. Howell, U.S. Senator from Alabama, statement 349
National Association of Regulatory Utility Commissioners, statement 358
Public Service Commission of the District of Columbia, statement 349
Tobias, Randall L., vice chairman of the board, AT&T, letter 351

TELECOMMUNICATIONS EQUIPMENT RESEARCH AND MANUFACTURING COMPETITION ACT OF 1989

WEDNESDAY, APRIL 25, 1990

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
SUBCOMMITTEE ON COMMUNICATIONS,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:07 p.m., in room SR-253, Russell Senate Office Building, Hon. Daniel K. Inouye (chairman of the subcommittee) presiding.

Staff members assigned to this hearing: Tom Cohen and John Windhausen, staff counsels; Gina Keeney and William Heyer, minority staff counsels.

OPENING STATEMENT BY SENATOR DANIEL K. INOUYE

Senator INOUYE. The Communications Subcommittee meets this afternoon and again on May the 9th to receive testimony on S. 1981. This is a bill introduced by Chairman Hollings and which will alter the Modified Final Judgment by repealing the telecommunications manufacturing restriction on the Bell Operating Companies. The last time we addressed issues surrounding the Modified Final Judgment was about two years ago, and at that time it was evident that despite some concern, there was very little desire on the part of the members to move legislation.

The Chairman of our full committee now believes that the time has come to lift the telecommunications manufacturing restriction and institute a new series of administrative safeguards against anti-competitive acts. While I continue to believe that on balance the Modified Final Judgment is a great benefit to our telecommunications market and its businesses and users, I have known the Chairman long enough to listen closely when he makes a proposal. He is extremely knowledgeable about telecommunications and the nature of the international marketplace, and I believe that his proposal deserves our most serious attention.

The debate surrounding the Modified Final Judgment has been ongoing since its inception, and this subcommittee has regularly held hearings to review the state of affairs. In that time I have learned some basics about this issue. First, it is without a doubt one of the most complicated issues to come before us. While there may be easy questions, there are no simple answers. Second, the stakes are so great for businesses, for users and for our country that no agreement will be easily fashioned. Third, the debate at its most fundamental level is about substance, not about process. Finally, the judge must be commended for undertaking the awesome task of administering the Modified Final Judgment and for acting responsibly.

In Washington when we speak of history most people think of what was on last night's news. If we take an approach with this issue, we will almost certainly repeat past mistakes. The government of the United States has brought four antitrust suits against AT&T over the past 75 years, all as a result of AT&T's control of bottleneck facilities. In three of these suits, divestiture was required. In all of those suits AT&T or its progeny were foreclosed from entering certain markets. We certainly cannot ignore the incentives and the capabilities to engage in anti-competitive acts that stem from control of the bottleneck.

The question now before us is whether there are other effective safeguards that can be imposed and whether other policies should now take precedence.

I would like to call upon the Vice Chairman of this subcommittee, Senator Packwood.

Senator PACKWOOD. I have no statement, Mr. Chairman.

Senator INOUYE. Are there any other statements here before we proceed?

Senator PRESSLER. I have no statement, Mr. Chairman.

OPENING STATEMENT BY SENATOR STEVENS

Senator STEVENS. Mr. Chairman, I would like to say I am pleased to be a co-sponsor of this bill with the Chairman. I think it is a subject that needs a thorough examination by this committee, and I am hopeful that we will have a bill ready to report this year.

It seems to me this is one of the subjects we have to be able to get some agreement on. There are many issues that come out of the total divestiture of AT&T yet to be resolved in my judgment. This is one of them.

I also want to state I am sure the committee knows that there is a conference going on on the spill bill, and I will not be able to be here. I think other members who would want to be here will not be here, and I hope those who follow this hearing will realize that there are several others pertaining to the committee going on at the same time. Thank you very much.

Senator INOUYE. Senator Lott.

OPENING STATEMENT BY SENATOR LOTT

Senator LOTT. Thank you, Mr. Chairman for giving me the opportunity to voice my interest in this subcommittee heaing as a membe of the full committee. I want to commend Senator Hollings on his introduction of this legislation which is before the subcommittee today. This particular issue is one in which I have had a keen interest for many years.

Before coming to the Senate I sponsored legislation in the House to allow the seven bell operating companies to manufacture telecommunications equipment. I felt then that the United States balance of trade in telecommunication equipment and services was being severely damanged because of their restrictions, and I am even more convinced of this truth today.

Spending on telecommunications equipment and services will grow by an estimated 9 percent annually in Europe by the year 1992. This is double the rate of the U.S. forecast. The MFJ restrictions have contributed to mounting trade surpluses with the United States. The Japanese and other foreign manufacturers are using these dollars to invest in their own research and development spending, while our domestic producers continue to lose market share.

The Bell companies have no realistic opportunity to recover capital that they might otherwise invest because the companies are not allowed to develop new products. The decree broadly prohibits Bell companies from participating in any aspect of the manufacturing process, including the R&D functions related to product development.

This is brought about by virtue of their not being able to recover their R&D costs through sales of those products, and of course, therefore means they cannot use their tremendous financial resources on R&D projects which lead to new products and new manufacturing jobs.

I have received countless letters from constituents urging the Senate to act to remove the restrictions on the Bell operating companies. These folks recognize if you want to win the game, you've got to put your best players on the field.

The current telecommunications policy of this country doesn't even let the Bell companies draw plays on the blackboard, much less put on a uniform.

Chairman Hollings has urged this country to play hardball with our foreign competitors. I'm ready to play.

If we are going to win this game of global competition in telecommunications and information services, we must shape a new telecommunications policy which will let some of our best players into the game.

I join Chairman Hollings urging the manufacturing restricion be removed, and am pleased to be a cosponsor of this bill, S. 1981. I look forward to working with my colleagues on this and related issues in the coming weeks.

Senator INOUYE. Thank you very much. And now it is my pleasure to call upon the author of this measure, the Chairman of this committee.

OPENING STATEMENT BY THE CHAIRMAN

The CHAIRMAN. Thank you, Mr. Chairman. Let me apologize for my tardiness, but we had the supplemental appropriations bill on the floor, and are in the Budget Committee and the mark-up, and it is hard to be everywhere at once as we all know.

I read, of course, the very erudite memo on this hearing and if there is ever any need for proof that I do not control these things, read this memo on this bill. It goes on for nine pages before it even begins to hint at the reason I introduced my bill on page 10. I can tell you right now, if the Bell Operating Companies would study this memo closely, you will see what our troubles are. If we can answer the first nine pages, of this memo then we will really get to the problem that Senator Lott has just been commenting upon, and that is that we are not controlling all of these misgivings or this cross-subsidization.

Well, Bell Canada is cross-subsidizing Northern Telecom, which has 20,000 employees in the U.S., and it is going like gangbusters. You have got Siemens in here, you have got Ericsson in here, you have got all the foreigners around here, and we sit right in a little ditty box. Hey, we are the Congress, we think we are in charge, but it's the foreigners who are in charge. And they are developing new technologies and they are cross-subsidizing into all of these things that the first nine pages says you better be sure does not happen. Now, that is the reason I introduced the bill. It is happening. It is happening. If we were king for a day and kept everybody out and really controlled the original intent of the Modified Final Judgment to the point where we did not have all these things occurring that this brief gives misgivings about for nine pages, that would be fine. But we live in the real world. It is happening around us, and it is labeled as healthy. Then why is it not healthy for our own American companies to get in?

There is an additional misgiving I have serving on the Budget Committee. We are suffering a shortage of American capital, but because of the restrictions in the MFJ Senator Packwood, I am forcing my capital overseas. I am telling the Bell companies to take these monies and show enough gold overseas, and that is what they are doing: in Ireland, in Hungary, trying to get a connection between Moscow and Tokyo. They are all over the world and, hey, I am sitting around sucking my thumb saying well, I am in charge. I am preventing antitrust activity, and I am going broke.

So I want this capital to be invested here if these restrictions are lifted, namely their manufacturing must be in the United States of America. And then, as is quite obvious to all the ratepayers of the Bell Operating Companies, when we lift the manufacturing restriction, they will then have an inducement to conduct research, and development. Then we will begin or continue—we are sort of vacillating now on that cutting edge, but we might get back in front and on the cutting edge of research and development and then have available the most modern of technology in communications. We are losing our advantage because what is happening is all taking place overseas. It does not pay for these folks to take their own experiences and put it into research because it is prohibited in a general sense. They have got BellCore, but since they cannot manufacture, there is no economic inducement whatever to really develop and produce new technologies and really compete. And thereby the ratepayers themselves, the public served by common carriers, are ultimately going to suffer.

So, no, I did not include information services in my bill. That is another debate. I did not go into the question of long distance, which is properly handled at the present time and there is enough competition. But the particular restriction on manufacturing has not worked at all because we've got the Public Service Commission of Sweden running this thing. We have got the Public Service Commission of Canada running this thing and everything else, and you folks are sitting up here on this big old Commerce Committee thinking you are in charge. You are not in charge at all. I want to get back in control of this thing through our Federal Communications Commission.

Good afternoon. I'm very pleased this afternoon to begin consideration of my bill, S. 1981, the Telecommunications Equipment Research and Manufacturing Competition Act of 1989. This bill is critical to the future of the Nation's telecommunications industry. The United States is in grave danger of losing its lead in telecommunications technology. For too long, we've been sitting on the front porch sniffing the roses while the Japanese, the Europeans, and the rest of the world's manufacturers have been investing in our own back yard.

It is high time we woke up to reality. The market for telecommunications equipment is global, and we are the only one not in the game. In trying to promote fair competition, we have shackled seven of our largest telecommunications firms so much that we are barely competing at all. This is an absurd policy.

Now I do not mean to suggest that Judge Greene is the problem. Judge Greene is a very smart man, and I deeply respect his abilities as a Federal court Judge. But this is not just a problem of antitrust law. This is a national problem of international proportions. The Bell companies together have annual revenues of over $77 billion. We cannot afford to keep these enormous capital resources on the sidelines any longer.

The future of telecommunications is in advanced electronics and computers. U.S. leadership in these high technology industries depends upon strong research and development activities. Today, the Bell companies spend only about 1.4 percent of their revenues on R&D activities. Most telecommunications firms spend 6 percent to 7 percent. This has got to be changed.

I realize that the MFJ permits the Bell companies to conduct some research activities today. The problem is that the BOC's today have no incentive to conduct the research that needs to be done. Unless they have a way to earn a profit off that research, they have no reason to do it. That is why my bill would let the BOC's into manufacturing. Whatever the BOC's develop in their labs, they can turn into a product for sale to the public. Only then will the BOC's have the incentive to put their enormous resources to use.

This is not to say that we do not need safeguards to ensure that there is fair competition. Clearly, the Bell companies continue to have a monopoly over their local telephone customers. We need to protect against self-dealing and cross-subsidization in that situation. But let's not listen to the "just say no" crowd. Lets's talk about how to craft those safeguards so that we can move forward.

Now I know that the Bell companies would like to be allowed into the other businesses of long distance and information services. Frankly, I do not know if anything is going to be happening in those areas in the near future. We need to be realistic and shoot for what we can get today. The Nation faces its most direct threat from foreign competition in the field of telecommunications manufacturing. We need to focus our energies on solving this problem today. We cannot afford to wait any longer.

I am pleased that we are having these hearings today and again on May 9. I look forward to the testimony this afternoon and hope that we can move forward on my bill in the near future.

Senator INOUYE. Senator Breaux.

OPENING STATEMENT BY SENATOR BREAUX

Senator BREAUX. Thank you very much, Mr. Chairman. I want to thank you, Mr. Chairman, for agreeing to have the hearing. I want to commend my colleague for his statement and also for introducing the legislation which is the subject matter of this hearing. I am looking forward to what the witnesses will have to say.

I have also introduced legislation which attempts to try and put the Congress back in charge of communications policy. I think it is not a good situation that we have one judge in one district court in one part of the country making communications policy for the entire United States based not on what is best for communications but what is essentially an antitrust determination. That should not be the basis for an aggressive telecommunications policy for the United States. But that, in fact, is what we are experiencing.

It is wrong for industries in this country who want to do certain things to have to go to a judge to get permission to do it based on an antitrust statute as opposed to a communications policy, and I think that this effort on behalf of Senator Hollings and others certainly reflects an effort to put the Congress back into formulating a communications policy for this country. There are some very legitimate questions that have to be addressed, and this hearing is the appropriate place to do it with regard to some of the concerns that will be brought up. Should we allow manufacturing by what is essentially a monopoly, can that be addressed? Can that be balanced? It must be. But this is the purpose of this hearing.

I would just commend the Chair and also the distinguished Chairman of the full committee for getting us to this point. Why should we be afraid to talk about this? Why should we be afraid to freely debate it. The competition that America is facing is not among our own people and within our own borders. It is worldwide, and we should be addressing a communications policy to compete against the world, not only limit competition among ourselves, and I thank you for having the hearing.

Senator INOUYE. Thank you. I think you have got the votes, but I think we should go through with the hearing.

Without objection, the bill will be made a part of the record.

[The bill follows:]

101ST CONGRESS
1ST SESSION

S. 1981

To permit the Bell Telephone Companies to conduct research on, design, and manufacture telecommunications equipment, and for other purposes.

IN THE SENATE OF THE UNITED STATES

NOVEMBER 21 (legislative day, NOVEMBER 6), 1989

Mr. HOLLINGS introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

---

A BILL

To permit the Bell Telephone Companies to conduct research on, design, and manufacture telecommunications equipment, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Telecommunications Equipment Research and Manufacturing Competition Act of 1989".

SEC. 2. FINDINGS.

The Congress finds that the continued economic growth and the international competitiveness of American industry would be assisted by permitting the Bell Telephone Companies to conduct research on, design, develop, manufacture, and market telecommunications equipment for American residential and business telecommunications users.

SEC. 3. AMENDMENTS TO THE COMMUNICATIONS ACT OF 1934.

(a) IN GENERAL.—Title II of the Communications Act of 1934 (47 U.S.C. 201 et seq.) is amended by adding at the end the following new section:

"REGULATION OF MANUFACTURING BY BELL TELEPHONE COMPANIES

"SEC. 225. (a) Subject to the requirements of this section and the regulations prescribed thereunder, a Bell Telephone Company may conduct research on and manufacture and provide telecommunications equipment, notwithstanding any restriction or obligation imposed before the date of enactment of this section pursuant to the antitrust laws on the lines of business in which a Bell Telephone Company may engage, except that a Bell Telephone Company may not engage in such manufacturing or provision or both through a joint manufacturing agreement with another Bell Telephone Company.

"(b) Any Bell Telephone Company engaged in any activity authorized under subsection (a) shall conduct such activity other than basic research only through a subsidiary that is fully separate from any other entity owned or otherwise affiliated with any Bell Telephone Company, including any affiliate of one or more of the Bell Telephone Companies that provides telecommunications services over the telephone network. The Commission shall issue rules to ensure that such subsidiary shall—

"(1) maintain books, records, and accounts separate from the parent Bell Telephone Company which identify all transactions with such parent Company and, even if such subsidiary is not a publicly held corporation, prepare financial statements which are in compliance with Federal financial reporting requirements for publicly held corporations, file such statements with the Commission, and make such statements available for public inspection;

"(2) consistent with the provisions of this section, carry out directly its own marketing, sales, advertising, installation, production, maintenance operations, manufacturing, and research and development relating to the equipment it provides, except that institutional advertising of a type not related to specific telecommunications equipment carried out by the parent Bell Telephone Company shall be permitted if each party pays its pro rata share;

"(3) conduct all of its manufacturing activity, including design and development as well as fabrication, and including the manufacture of components, within the United States;

"(4) have no more than 90 per centum of its equity owned by its parent Bell Telephone Company;

"(5) acquire all of the debt necessary to finance itself from the financial markets outside the operations of its parent Bell Telephone Company, and be prohibited from acquiring debt in a manner that would permit a creditor, on default, to have recourse to the assets of the Bell Telephone Company's telecommunications services business; and

"(6) shall operate at all times on an arms-length basis from any of its parent Bell Telephone Company's other businesses, including the Bell Telephone Company's telecommunications services businesses.

"(c) The Commission shall issue regulations requiring that any Bell Telephone Company that engages in any activity authorized by subsection (a) shall—

"(1) provide to other telecommunications equipment manufacturers opportunities to sell such equipment to itself or any of its affiliates which are comparable to the opportunities which it provides to itself or any of its affiliates; and

"(2) not subsidize its fully separated subsidiary with revenues from its regulated telecommunications services.

"(d) For the purposes of administering and enforcing the provisions of this section and the regulations prescribed thereunder, the Commission shall have the same authority, power, and functions with respect to any Bell Telephone Company as the Commission has in administering and enforcing the provisions of this title with respect to any common carrier subject to this Act.

"(e) The authority of the Commission to prescribe regulations to carry out this section is effective on the date of enactment of this section. The Commission shall prescribe such regulations within one hundred and eighty days after such date of enactment.

"(f) As used in this section:

"(1) The term 'affiliate' means any entity (A) that is under direct or indirect common ownership by a Bell Telephone Company, or directly or indirectly owns a Bell Telephone Company, (E) that is under direct or indirect control by a Bell Telephone Company, or directly or indirectly controls a Bell Telephone Company, or (C) in which a Bell Telephone Company or its other affiliates directly or indirectly (i) have an equity interest (or the equivalent thereof) of more than 10 per centum or (ii) exercise substantial management influence.

"(2) The term 'antitrust laws' has the meaning given such term by subsection (a) of the first section of the Clayton Act (15 U.S.C. 12(a)).

"(3) The term 'Bell Telephone Company' means those companies listed in appendix A of the Modification of Final Judgment entered August 24, 1982, in United States v. Western Electric, Civil Action No. 82–0192 (United States District Court, District of Columbia), and includes any successor or assign of any such company, but does not include any affiliate of any such company.

"(4) The term 'manufacturing' has the same meaning as such term has in the Modification of Final Judgment entered August 24, 1982, in United States v. Western Electric, Civil Action No. 82–0192 (United States District Court, District of Columbia) as interpreted in United States v. Western Electric, Civil Action No. 82–0192 (United States District Court, District of Columbia) (filed December 3, 1987).

"(5) The term 'telecommunications' means the transmission, between or among points specified by the customer, or information of the customer's choosing, without change in the form of content of the information as sent and received, by means of an electromagnetic transmission medium, including all instrumentalities, facilities, apparatus, and services (including the collection, storage, forwarding, switching, and delivery of such information) essential to such transmission.

"(6) The term 'telecommunications equipment' means equipment, including customer premises equipment, telecommunications products used by a carrier to provide telecommunications services, and software necessary to operate such equipment.

"(7) The term 'telecommunications service' means the offering for hire of telecommunications facilities, or of telecommunications by means of such facilities.".

(b) CONFORMING AMENDMENT.—Section 2(b) of the Communications Act of 1934 is amended by striking "section 224" by inserting "sections 224 and 225".

○

Senator **Inouye**. Now, if I may call upon the witnesses, our first witness is the Chairman of the BellSouth Corporation of Atlanta, Georgia, Mr. John L. Clendenin.

Senator **Breaux**. Mr. Chairman, before the witness talks, I would just like to commend the staff for the memorandum that I think was prepared probably for the Democratic side, but your staff did a really excellent job, and I think the record should show that. It is balanced, and I think it really helped me a lot in understanding the issues at hand.

Senator **Inouye**. Mr. Clendenin.

STATEMENT OF JOHN L. CLENDENIN, CHAIRMAN, BELLSOUTH CORP., ATLANTA, GA

Mr. **Clendenin**. Thank you very much, Mr. Chairman. Let me say how much I appreciate the opportunity to be here. We at BellSouth continue to believe that Congress should make national telecommunications policy. S. 1981 is a positive step in that direction as well as a big step toward a policy that serves America's economic and other interests at home and abroad. I commend committee Chairman Hollings for his vision in introducing this forward-looking legislation, and I also would like to thank the members of the committee for your willingness to consider its merits. I sincerely hope that at some time in the future the committee will also address the restrictions on information services and inter-LATA long-distance service since they too affect American competitiveness, but I am here today to address S. 1981.

The need for such a measure is clear. The MFJ is out of synch with the realities of global commerce and the demands of manufacturing in the information age. The problems it creates and aggravates are a drain on American competitiveness. With its overly broad definition of manufacturing, the MFJ stifles innovation in a strategic industry, aggravates the trade deficit, transfers American technology abroad, directs American capital to other nations, and I believe costs this country jobs.

I think we need to know just how broad this definition is, this definition of manufacturing, because the court has greatly expanded this restriction, and there has been considerable confusion on this issue. Under the MFJ, the restriction on manufacturing means far more than preventing us from fabricating a product. BellSouth cannot even write the fundamental software used in our network switching centers, which are actually giant computers, because under the court's definition creating this core network software is "manufacturing."

The court's definition also creates so much uncertainty that we do not feel safe in supporting American manufacturers, large or small, that ask us for capital to help bring a new product to market or to expand their capacity. As a customer, we are even sharply restricted in how closely we can work with a company that is manufacturing equipment for us. We cannot engage in the kinds of consultations that are common practice and necessary practice in efficient information age manufacturing. We can participate in only parts of the process. We are not allowed to weave the parts together into the full design process in a way that is so critical with today's technology.

But while BellSouth cannot take part in manufacturing in any real sense in this country, foreign companies have total freedom to enter the U.S. market. To me that just does not seem logical. Some folks have characterized the debate about the MFJ as a dispute between the Bell holding companies and AT&T. I believe it is much more than that. I believe it is a fundamental question of the general welfare. AT&T is one of the world's premier manufacturers and if S. 1981 becomes law, it will continue to be a winner at the highest levels in domestic and international competition. And if S. 1981 becomes law and we are ultimately allowed to participate in manufacturing, I am sure that contrary to what some have asserted, BellSouth will continue to be one of AT&T's largest customers.

Likewise AT&T Bell Laboratories will remain one of the world's premier research operations. With all of its resources and talent, Bell Labs will not be threatened by the many small companies that need assistance in bringing ideas to the market.

The issue thus goes far beyond the interests of AT&T, Bell South or the Bell holding companies. It really goes to the question of American competitiveness. Let me give you two examples of how the MFJ saps America's competitive strength in one important area, capital for small high tech manufacturers in this country. International Mobile Machines Corporation, a small Pennsylvania company, came to BellSouth with an idea for a wireless radio technology. This technology would have been useful for communications in rural areas, which BellSouth has plenty of, and perhaps more generally for cellular all over the place. The company needed capital to bring the product to market. We were interested, but the MFJ stood in the way. The company is now working with foreign interests to raise that money.

I hope IMM will not become yet another high tech asset to be taken out of America's competitive column and put into that of another nation. But if it is taken from our column, I guess I will not really be surprised.

Another company, CXC, Incorporated, located in California and known for making a telephone PBX called "The Rose", offered BellSouth an equity position so it could increase its manufacturing capacity. At the time, The Rose was at the very leading edge in switchboard design for the small and medium sized business market. Again, we were interested. Again, the MFJ stood in the way. Today a consortium of foreign companies owns the intellectual property rights in the technology developed by CXC.

Now, we all recognize that we are operating in a global economy, but I do not believe any of us would suggest that American policy should be designed to work in this fashion. And I certainly do not think any of us would maintain that results such as these enhance America's competitiveness. U.S.-based innovation marches offshore then returns as a foreign made product, contributing to a troubling free fall in the telecommunications trade deficit.

Yes, the MFJ involves very complex issues. But intricate arguments should not obscure these blunt facts. They tell us that something is terribly wrong with the current telecommunications policy. Maintaining the status quo on this policy is just not good enough.

The status quo did not serve these two small companies that needed capital. It will fail too many others, and it will not serve America's competitive position.

Nor does the status quo serve America through that other peculiar twist of current policy that we always ought to keep in mind as we consider this issue: BellSouth is barred from manufacturing telecommunications equipment here in this country, but foreign companies do so freely.

I find that difficult to accept. Now, admittedly, BellSouth knows very little about the fabrication part of manufacturing, but we do have a great deal of expertise in telecommunications. And we believe we could couple our telecommunications expertise with the manufacturing expertise of American companies that make a variety of high tech products, both inside and outside the telecommunications industry.

A joint venture that combined our skills could, in effect, create a new company and benefit America through new jobs, new products and increased competitiveness. But that cannot happen under the MFJ.

Eight years ago, just before the divestiture of AT&T, America ran a trade surplus in telecommunications. Today the telecommunications trade deficit is some $2.6 billion. Stacked against the overall trade deficit, this might seem like a small amount. But it is nevertheless, $2.6 billion that the Senate and the House could affect simply by allowing the BHCs to add their resources to America's manufacturing muscle.

How much could we contribute to cutting the deficit? I cannot say specifically, Mr. Chairman, but we would sure like the chance to meet the competition head on in the marketplace, and I believe we have quite a bit to offer.

Earlier, I mentioned that the manufacturing restriction constrains our development of software and also precludes us from collaborating on the design of the equipment that others are making for us.

The software restriction is especially damaging in the way it slows the timely delivery of new services to our business and residential customers.

By upgrading the generic software in our network switching centers, we can provide a wider array of desired telecommunication services. But because of the MFJ, we have to go hat-in-hand, asking vendors for this software—vendors who, interestingly enough, are often our competitors.

As you might imagine, they are often less than enthusiastic about writing this software for us. Instead, they want to convince us to buy another newer switch.

We have experienced lags of up to two years in getting new software for network switches that we already own, and we think our customers deserve a more timely response. When we are a customer, we can provide only generic specifications to the manufacturers. We are supposed to design our networks without being allowed to even consult on the design of the equipment that goes into them.

Well, maybe that was workable in the days of smokestacks, but it is not workable today. In this age it is awkward, inefficient and impractical.

Information age manufacturing requires that customers, suppliers and manufacturers work very closely together at every step in the process. We believe we should be able to take part all the way through, from the inception of the idea to the actual fabrication.

As it is, the effect of the MFJ is to discourage research and development and to slow down innovation. And it slows innovation at a time when the numbers on patents and R&D spending show that global competitors are gaining ground.

S. 1981 would address such problems, and we heartily applaud its thrust. We have offered some suggested refinements in my written testimony. We believe these will clarify a couple of areas and help ensure that the bill's aims are realized. But refinements aside, we feel that S. 1981 goes to the core issue, namely, how competitive America will be now and in the future.

Telecommunications is increasingly at the center of our Nation's competitiveness. Other nations have targeted American markets and are bent on exploiting their other advantages through the vast powers of information age telecommunications.

Many voices defend the status quo. They say there is no cause for alarm, that America is the clear leader in at least the network segment of telecommunications. That argument leaves me terribly uncomfortable.

Quite frankly, it does not jibe with the reality or the lessons of the last 30 years. If there is one collective lesson that we all should have learned in that time, it is that no industry is invulnerable. Autos, steel, consumer electronics—we thought they were all invulnerable.

Our trade deficit today is a telling measure, not only of our competitors' skills, but of our own mistaken complacency in an earlier time. Now we are paying a heavy price in the marketplace and the policy arena.

We dispatch trade negotiators around the world. They debate, they cajole, they sign agreements, and they come home. We wait for our overall trade position to improve. Here in the Senate you and your colleagues labor over legislation and other ways to turn the trade deficit around. You recognize that things are often tilted against American companies, and, quite rightly, you call for a level playing field.

Well, the telecommunications playing field is not level right here in America, but we cannot lay the blame solely on other nations. For the most part, we have done it to ourselves. We have tilted the playing field against our own players. The seven BHCs are relegated to sitting on the sidelines.

Now it is time to tilt the playing field back toward fairness, and unlike so many obstacles to improved trade that we might not be able to remove—such as other countries' customs or cultures or policies—we can remove this one. And S. 1981 would do the job.

We at BellSouth have made every effort to live by the letter and the spirit of the decree. Today, it is clear that the restrictions have outlived their usefulness. The public interest demands that they be re-examined.

I urge you to consider S. 1981 in the context of America's current standing in the international marketplace, our prospects for the future and the implications of both for American business and consumers.

I urge you to reassert the role of Congress in establishing telecommunications policy. I thank you again for this opportunity. I will remain in the audience during the proceedings and will gladly answer any questions beyond those that you may have now. Thank you very much.

[The statement follows:]

STATEMENT OF JOHN L. CLENDENIN, CHAIRMAN AND CEO, BELLSOUTH CORP.

Thank you, Mr. Chairman and members of this Subcommittee. I thank you for this opportunity to offer my views on S. 1981. At BellSouth we continue to believe that Congress should make national telecommunications policy. S. 1981 is a positive step in that direction as well as a big step toward a policy that serves America's economic interests domestically and internationally.

I commend the Chairman for his vision in introducing this forward-looking legislation aimed at improving American competitiveness. I also commend the members for your willingness to consider the merits of the bill.

America needs a telecommunications policy more suited to the realities of global commerce and to the process of manufacturing in the Information Age. Manufacturing in this age of computing and communicating technologies includes far more than the actual fabrication of a product, but the MFJ simply doesn't permit us to participate in what have become the necessary elements in an efficient, successful and competitive process.

S. 1981 gives us the opportunity to build a policy for the 21st Century. The bill could address a number of problems caused by current policy, problems that add up to a serious drag on America's competitiveness today and that put it at greater risk in the future.

And I want to emphasize that the issue is indeed American competitiveness. The issue is much more than a dispute between the Bell Holding Companies and AT&T.

AT&T is one of the world's premier manufacturers, and it's going to continue succeeding at the highest levels in international competition. And if S. 1981 becomes law and we are ultimately allowed to participate in manufacturing, I'm very sure that BellSouth will continue to be one of AT&T's largest customers, just as we are today. And they'll remain one of our biggest customers.

Likewise, AT&T Bell Laboratories will remain one of the world's premier research operations. It's an asset to America. We need many sources of new ideas in America and AT&T Bell Labs, with all of its resources and talent, is not threatened by the many small companies that need assistance in bringing ideas to the market.

We're here to discuss an issue that goes far beyond the particular interests of BellSouth, the Bell Holding Companies or AT&T or, indeed the MFJ itself. That issue is, again, American competitiveness.

My views are based on my experience in telecommunications in general and at BellSouth in particular. To me, it's clear that the MFJ stifles innovation in this strategic industry, aggravates the trade deficit, transfers American technology abroad, directs American capital abroad and costs this country jobs.

To illustrate how flawed this policy is, let me give you two examples.

A high-tech, U. S. manufacturing company called International Mobile Machines Corporation came to BellSouth with an idea for a wireless radio technology that would have been useful for communications in rural areas and perhaps more generally for cellular. The company needed capital to make the technology a competitor in the marketplace. The MFJ prevented us from offering that help in a normal commercial relationship.

But the idea was too good to be passed up, and sure enough, it hasn't been. The company is in the process of raising the necessary capital working with a foreign company. I can only hope that this will not become another high-tech firm that will be taken out of America's competitive column and put into that of another nation. That happens frequently in this industry.

Another company, CXC, Inc., known for making a PBX called The Rose, offered BellSouth an entity position that would allow CXC to gain the capital it needed to expand and increase capacity. We were interested, but, again, the MFJ wouldn't allow us to take part.

Unfortunately, CXC is no longer in existence. But their design and intellectual properties live on in the hands of foreign investors.

In a global economy, I suppose, we're going to see a great deal of this. Perhaps the idea of a truly global economy necessitates some of it. But I don't believe any of us would suggest that American policy should be designed to work in the fashion I just described. Nor would we maintain that results such as these enhance America's relative competitive position.

These examples get to the nub of the matter. Yes, the MFJ involves complex issues. But whatever the complexities, intricacies and subtleties paraded out in this debate, these examples should stand out clearly in the foreground of all our discussions; their blunt facts are sufficient in themselves to indicate that something is terribly amiss with current telecommunications policy.

America is plagued by a large and stubborn trade deficit; many small, high-tech American companies struggle for needed capital; you and I know it's vital that this country stay out front in telecommunications; we want to create more jobs. Yet we follow a policy that transfers American companies, talents and technology abroad. (See Attachment C-1.)

The two examples I cited are not isolated instances. I could give you others.

At BellSouth, we've had literally dozens and dozens of serious inquiries. But we've reached the point where we seldom sit down and talk with companies that would like to join with us in some manufacturing venture. We stop them at the door, explaining that, much as we'd like to, no matter how promising their idea, there's no need to talk.

Often, such companies are eventually taken over by a foreign company. And, thus, U. S.-based innovation marches off shore, then returns as a foreign made product, contributing to a continuing free fall in the telecommunications deficit. (See Attachment B-1.)

In preparing for this testimony, I came across a survey that listed 70 American telecommunications and other high-tech companies that had been bought by foreign companies in the past five years.

Under the MFJ, BellSouth has no chance to help keep companies such as these in America's competitive column. Instead, the MFJ encourages their transfer to the competitive advantage of other nations. We can't blame other nations for this exodus; we're causing it ourselves.

An American company goes abroad for capital; then the profits leave here and become more foreign capital to buy yet another American company. And so it goes. Yet we're telling seven of this country's best telecommunications companies to take their capital elsewhere in the world if they want to invest in jobs and earn a return for their shareholders. National telecommunications policy makes it the only option.

BellSouth doesn't have the capital to fund every small, high-tech manufacturer that comes along with a good idea. Nor do any of the other six Bell Holding Companies. But we do have access to capital that would undoubtedly assist many promising and innovative companies to develop products and hence create jobs.

We'd like the chance to help these companies pursue their ideas, and we'd like the chance to pursue our own ideas.

At BellSouth, we believe we could couple our telecommunications expertise with the manufacturing expertise of American companies that make a variety of high-tech products both inside and outside telecommunications. A joint venture that combined our skills would, in essence, create a new company and benefit America through new jobs, new products and increased competitiveness.

Foreign companies have complete freedom to manufacture telecommunications equipment and components here in America, while BellSouth can't. (See Attachments C-2 & C-3.) There has to be something basically flawed with a policy that allows foreign companies to do in this country what American companies are not allowed to do.

Of course, the MFJ allows BellSouth to manufacture overseas -- but only if it can be shown that the products do not come into this country.

We think American companies should be allowed the freedoms in America that are available to foreign companies here, including foreign telephone companies. We think America would benefit from our knowledge and our assets in dealing with the global marketplace.

Eight years ago, just before the divestiture of AT&T, America ran a trade surplus in telecommunications. Today, the surplus is only a memory, and the telecommunications trade deficit is some $2.6 billion. (See Attachment B-2.) While this $2.6 billion could be considered a relatively small piece of the overall trade deficit, it is nevertheless a deficit that the House and Senate could directly impact simply by allowing the Bell Holding Companies to participate meaningfully in the manufacturing process.

I should point out here that the very definition of manufacturing under the terms of the MFJ and related court interpretations causes serious problems. Manufacturing is defined so broadly that we can't even "manufacture" software crucial to certain innovative advances in telecommunications equipment. In the day-to-day business of operating and improving a telecommunications network, this is a particularly damaging restriction.

In our industry, software rivals hardware in its importance for delivering services. Our big network switching centers are giant computers, and we can provide business and residential customers a richer array of telecommunications services simply by upgrading the generic software in these computers.

But since we are precluded from writing this fundamental software for these switches, we have to go hat-in-hand asking vendors for it -- vendors who are often our competitors. And too often they don't see it being in their interest to give us that software with any dispatch. Instead, they might want to convince us to buy another switch, another newer computer they've built. Our customers, of course, would have to pay for those or wait until the new software is written. And at BellSouth, we have experienced lags of up to two years in getting new software for network switches that we already own. We're confident that if we could write the software ourselves we'd get it done faster. Or, if our vendors knew we could, they'd be willing to move more quickly to respond to our customers' needs. We think the public deserves that.

But this software restriction is evidence of a larger problem. Under the MFJ, we're barred from activities that are now essential to the manufacturing process -- from design and development through the actual fabrication of a product. The MFJ forces us to remain essentially vague about what we need from a manufacturer: We're allowed to deal only in generic specifications.

More than just hobbling us, then, the MFJ also hobbles companies that manufacture for us. We can't play the active role in the process leading up to the fabrication, the role demanded by the complexities of the equipment and the networks. Too often, this leaves these companies to a trial-and-error method to come up with exactly what we need.

We're supposed to design our networks without consulting on the design of the equipment that goes into them. We're supposed to come up with general requirements without providing any detailed specifications.

Perhaps this was practical in the smokestack days of manufacturing. It is not today. And this is especially so as we merge computing and communications technologies that create the information and telecommunications networks that today are the heartbeat of world commerce.

Millions of components are combined on a single chip; we don't measure their speed in tenths of seconds or hundredths of seconds, but rather in billionths of seconds. And these are the building blocks of our technologies.

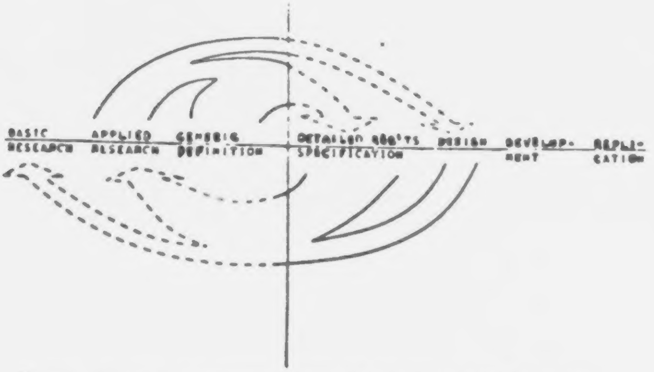
The whole manufacturing process is drastically different than it was during the Industrial Age. It's far more complex; it has to be aimed at tailoring products and services to very specific and specialized needs of customers.

The complex process requires that customers, suppliers, and manufacturers all work very closely together at every step in the development of a new product, or a change in process, or an updating of a feature. This is especially true in the case of products and services associated with the merging of computer and telecommunications technologies.

But, because of the MFJ, BellSouth is not permitted to work closely enough with suppliers in the total design and development of a product. We're barred from a practice which is common in every other industry, an interaction that is typical of customer-manufacturer relationships in the Information Age.

The figure below illustrates the interactions that normally occur in the research, design and development phases of manufacturing. Encouraging these interactions is the key to strengthening industrial competitiveness. The dotted lines indicate the areas of interaction that the MFJ prohibits BellSouth from taking part in.

Figure 1 Effect of MFJ Manufacturing Restriction


BASIC RESEARCH
APPLIED RESEARCH
GENERIC DEFINITION
DETAILED REQ'TS SPECIFICATION
DESIGN
DEVELOP-MENT
REPLI-CATION

Source: National Telecommunications and Information Administration, Department of Commerce

We can engage in certain parts of the process. But we are not allowed to string the piece parts together into the full process from start to finish. We believe we should be able to take part all the way through -- from the inception of the idea to the actual fabrication.

Because of this broad definition of restrictions in manufacturing, we believe the MFJ hurts research and development, introduces serious inefficiencies in manufacturing, and slows innovation. And it slows it at a time when competitors are gaining ground. (See Attachment D-2.)

At divestiture, for example, Japanese telecommunications equipment manufacturers invested less than half as much in R&D as their U. S. counterparts. Today, the numbers suggest that Japanese companies have caught up and are now exceeding U. S. industrial R&D outlays in telecommunications. Moreover, Japanese companies are increasing their rate of investment in R&D by a 3 to 1 ratio over AT&T's growth rate of R&D investment. We feel that maintaining the status quo in these circumstances would invite serious repercussions for U. S. trade and technology interests. (See Attachment D-1.)

Clearly, the MFJ discourages R&D in the seven Bell Holding Companies. While most high-tech companies spend 8 to 9 percent of their total sales on R & D, the BHCs collectively spend only 1.3 percent. (See Attachment B-3.)

Some might claim we have an obligation to spend more than this. But given the MFJ restrictions, devoting relatively little money to R&D is arguably the prudent and responsible course. As long as we cannot expect a reasonable return on R & D, we owe it to our shareholders and our customers not to spend more.

To put it bluntly, today, direct investment in R & D is something of a dead-end street for much of what we do. National telecommunications policy makes it so.

S. 1981 would address this and other problems associated with the current policy. We at BellSouth believe the bill can be improved to assure that the bill's aims are realized, and my recommendations for changes are in Attachment A. I'll not go into those here, but I would invite your perusal of these suggestions and would be pleased to respond to any questions you might have.

My company sees the need for legislation like S. 1981 every day as we serve millions of business and residential customers, primarily in nine states of the southeastern United States. We have more than 17 million access lines, millions of which are in rural areas of the southeast. We are also a leading provider of cellular and other mobile communications services in major markets around America and in several other nations.

We're recognized as a leader in modernizing our telecommunications network with digital equipment and fiber optic cable. We want to remain a leader in technology because that's what it will take to provide our customers with the products and services they want and need.

But, as I've indicated, the MFJ restrictions on manufacturing don't allow us to serve our customers as we would like. For the people and businesses of our nine states and those in the other Bell regions, these circumstances alone, it seems to me, are sufficient reason to support the thrust of S. 1981.

But, whatever our views on this particular bill or the MFJ, we all know the issue goes way beyond this aspect of the question. The issue goes far beyond BellSouth -- or any other single company. The issue goes to the heart of how competitive America will be in the coming decade and in the early decades of the next century -- perhaps far beyond that.

Because we all know we're not talking about an industry that sits on the sidelines of the economy. We're talking about an industry that is central to what is happening in commerce everywhere. Banking, finance, textiles, automobiles, agriculture, insurance, retailing, all forms of manufacturing -- we've seen them all transformed in recent years by the dynamics of information and telecommunications.

The essence of success in today's business, whatever it might be, seems to revolve around the ability to move, manipulate and access information at least as efficiently as the competition does. And the companies, cities, states and nations that stay out front in information and communication technologies are going to have an edge in the marketplace.

Thus in S. 1981 we're talking about the capacities and capabilities of the telecommunications products and services that will be available to the businesses and the individual consumers in your states. We're talking about businesses whose markets have been targeted by skilled, aggressive competitors from abroad who are bent on exploiting their advantages through telecommunications.

Will America stay at the leading edge in telecommunications? I would not presume to say with certainty one way or the other. But I can say that our chances are not improved by forcing seven of our largest telecommunications companies to sit on the bench.

Being out front means innovating. To innovate, a company has to keep pushing technologies -- hardware and software. It has to be allowed the freedom to continually search for breakthroughs, new developments that will win in the marketplace against foreign and domestic competitors. An innovator doesn't just shop out of other people's catalogs.

Manufacturing, then, is at the heart of innovation, and we're barred from manufacturing. And we're barred from manufacturing by a restrictive definition so broad that we're hampered even in pursuing routine ideas our own people come up with.

The MFJ works against America's larger interests. It expedites the flow of American technology and capital abroad, and, ultimately weakens an industry whose strength is increasingly at the very core of a nation's competitive powers.

S. 1981 is a serious effort to come to grips with these problems. It is an effort to build a policy based on reflection and choice rather than on inertia and the practices of the past.

Many people and companies defend the current policy -- the status quo. A number of companies and interests take this line. They say there's no cause for alarm, that America is the clear leader in telecommunications and that we'll continue to stay out front.

This argument leaves me terribly uncomfortable. Because when you get right down to it, when you cut through all the twists and turns -- this argument suggests that the American telecommunications industry is invulnerable to today's serious challenges from the international marketplace.

As much as you and I would hope that will be the case, we're also realists. We've seen what's happened in other industries. If there's one collective lesson this nation should have learned in the last thirty years, it's that no industry is invulnerable. (See Attachment B-4.)

We all remember a day when the American automobile industry was supposedly invulnerable and so were our steel and consumer electronics industries. We were dominant and no one could touch us -- or so it seemed.

Our trade deficit today is a telling measure not only of our competitors' skills, but of our own mistaken complacency in an earlier day.

Now, we're paying a heavy price in the marketplace and the policy arena. We send trade negotiators to tables around the world. They debate, they cajole, they sign agreements. They come home. They go back and debate some more and sign more agreements. Meanwhile, we wait for our overall trade position to improve.

Here in the Senate, you and your colleagues labor over legislation and ways to turn the trade deficit around. You recognize that things are often tilted against American companies, and, quite rightly, you call for a level playing field.

Well, the playing field is not level in telecommunications in this country. But we can't place the blame solely on other nations. For the most part, we've done it to ourselves. We've tilted the playing field against our own players.

Now it's time to tilt it back towards fairness. And unlike so many obstacles to improved trade that we might not be able to change -- other country's customs, cultures and policies -- we can change this one.

S. 1981 will change it. I urge that you consider it carefully and seriously. I urge your reflection on it in the context of America's current standing in the international marketplace, our prospects for the future and the implications of both of these for American consumers and businesses.

Thank you.

ATTACHMENT A

Comments on S.1981: The Telecommunications Equipment Research and Manufacturing Competition Act of 1989

There are certain aspects of this bill which need to be addressed in order for it to fully achieve its purpose of enhancing the competitive business environment in telecommunications manufacturing. The areas of concern and proposed alterations to the bill are presented in the remainder of this paper.

1. Designation of Business Entities Affected

In the bill the term "Bell Telephone Company" ("BTC") is used frequently to designate which business entities will be affected. On page 6 in lines 4-11, the term is defined to include the telephone companies listed in the consent decree and to exclude all affiliates of those companies. This has several very undesirable side effects, as explained below, without providing any corresponding public benefit:

A. Only subsidiaries of a "Bell Telephone Company" can manufacture

On page 2 in lines 12 through 17, permission is given to the BTCs to "... conduct research on and manufacture and provide telecommunications equipment, ...". Since affiliates of the BTC are not mentioned in the paragraph granting manufacturing relief, this means that all other business units of a BTC, including the BTC holding company itself, are not granted relief from the manufacturing restriction. Since one of the unstated but obvious purposes of the bill is to allow the BTCs into the manufacturing business while protecting ratepayers and competitors from the possibility of cross-subsidization and discrimination, that purpose is not served by this restriction. This restriction merely limits the business options available to the BTCs and thus limits their incentive to engage in manufacturing, which is detrimental to the American economy and the public.

B. Multiple telephone companies belonging to the same Bell Holding Company cannot cooperate in manufacturing

On page 2 in lines 17-20, a BTC is prohibited from engaging with another BTC in manufacturing or provision of telecommunications equipment. In BellSouth's case, for example, South Central Bell could not join with Southern Bell in manufacturing or providing telecommunications equipment. This would produce inefficiencies within the BellSouth companies and stifle innovation without producing any corresponding benefit to competition or to the public. This problem can be corrected, while addressing the bill's real concern of unrelated BTCs joining together to manufacture, by making the joint venture prohibition apply only to unaffiliated BTCs. Specifically, by adding the word "unaffiliated" before the phrase "Bell Telephone Company" on line 19 of page 2, the public interest is served without imposing unnecessary costs on a BTC (which would ultimately be passed on to the consumer in the price of goods sold).

2. Definition and use of the term "telecommunications equipment"

On page 7 in lines 4-8, "telecommunications equipment" is defined as "... equipment, including customer premises equipment, ... ". The definition goes on to qualify "telecommunications products" as being "... used by a carrier to provide telecommunications services, ...". Since the "equipment" of which customer premises equipment is a part is not qualified by any other language, the definition of "telecommunications equipment" is so broad as to encompass any kind of equipment. This definition causes some difficulties including the following:

A. The language could take away some freedoms the BTCs and their affiliates presently have under the decree

Under the decree, BTCs and their affiliates can already provide customer premises equipment without any restrictions on business structure or features, or on functions or uses of the equipment as long as the equipment is used by the customer to meet his or her private communications needs. The BTCs and their affiliates have offered customer premises equipment since divestiture, first through separate subsidiaries pursuant to FCC regulations and more recently, in some cases, without structural separation after the FCC modified those regulations. Precluding the BTCs and their affiliates from continuing to provide customer premises equipment would lessen competition in that market to the detriment of the consumer.

B. The customer premises equipment would be limited to that used by a carrier if the qualifier "used by a carrier to provide telecommunications services" is applicable

If this qualifier, which is cited on page 7 at lines 6-7, is intended to apply to the phrase "equipment, including customer premises equipment", it is a contradiction in terms. By its nature, customer premises equipment is used by the customer, not by the carrier. Thus no customer premises equipment could ever pass the test of this qualifying phrase. If the qualifier does not apply, then the problem identified in paragraph 2A, above, exists.

C. New separate subsidiary requirements would be imposed on the customer premises equipment business that do not now exist

On page 2 line 13, permission is granted for a BTC to "... provide telecommunications equipment, ...". As previously noted, the definition of telecommunications equipment includes customer premises equipment. On page 2 line 21 through page 3 line 2, the exercise of the right to provide telecommunications equipment (and therefore customer premises equipment) is conditioned on "... a subsidiary that is fully separate from any other entity ...". This has the effect of requiring the customer premises equipment provision business to be moved to a separate subsidiary, a requirement that does not exist today. Indeed, BellSouth just finished less than a year ago a very expensive effort to reintegrate the provision of customer premises equipment into its operating telephone companies pursuant to permission granted by the FCC. Reversing that action would result in tremendous expense and major disruptions of the BTC's businesses and of their customers' businesses.

All of the concerns about customer premises equipment can be corrected in two steps. First, remove customer premises equipment from the definition of telecommunications equipment and give each term the definition that it has in the consent decree. Second, in every case where the manufacture and provision of telecommunications is dealt with, add "and the manufacture of customer premises equipment." Since the provision of customer premises equipment is already permitted, any references to or inferences of the provision of customer premises equipment should be removed from the bill. This will allow the BTCs to provide their customer premises equipment on a competitive basis, which benefits consumers by giving them a wider choice.

3. The separate subsidiary language is unnecessarily broad

On page 2 beginning at line 21 and continuing on page 3 through line 2, a very sweeping separate subsidiary requirement is set forth. Because of the requirement that the manufacturing entity be separate from any other business unit, a Bell Holding Company could be put at a major competitive disadvantage in some of its unregulated businesses that have nothing to do with the local telephone company. For example, BellSouth has a subsidiary that is engaged in the sales and service of customer premises equipment outside of the territory served by its telephone companies. Some of its customers would like for it to customize either the hardware or the software of the equipment it provides to them. The bill as written would require that it set up another company to do those modifications since they are considered manufacturing under the consent decree. When such an entity clearly has no relationship to a BTC, and there is no possibility of the BTC subsidizing the activity, it does not in any way serve the bill's purpose to insist that the manufacturing activities be separated. The duplication of forces and effort merely adds expenses without providing any further protection to competition or to the ratepayer.

The solution is to change lines 23-26 on page 2 and lines 1 and 2 on page 3 to read, "... only through an affiliate that is fully separate from the Bell Telephone Company. The Commission shall issue rules to ensure that ...". This change provides full protection for the BTC customers without placing any unnecessary burdens on the other business units of a Bell Holding Company, and should be accompanied by the change described in paragraph 2C, above. In addition, the phrases "the parent" and "its parent" should be replaced by the phrase "the affiliated" wherever they appear in subsection (b) on pages 3 and 4, and the word "parent" should be deleted from line 6 on page 3.

4. The bill may inhibit the BTCs from carrying out their normal business functions in the most economical manner, thus imposing costs on the public without any benefits to competition

On page 3 lines 13-21, a requirement is stated that the manufacturing business unit must "... carry out directly its own marketing, sales, advertising, installation, maintenance operations, manufacturing, and research and development relating to the equipment it provides, ..." This raises a number of concerns which will be dealt with below:

A. BTCs routinely do some of these functions with equipment from unaffiliated manufacturers

Almost all maintenance operations on telecommunications equipment are done by the BTC. This language would alow a BTC to perform maintenance on all of the equipment it owns except that which it has bought from its own affiliate. In the case of that equipment, the BTC's maintenance people would have to stand idly by while the manufacturing affiliate's maintenance people were summoned, were dispatched, and performed the maintenance. This is so wasteful that it would mean that a BTC could never afford to buy telecommunications equipment from its affiliate.

B. These provisions are contrary to all business practices observed in the highly competitive customer premises equipment business

Providers of customer premises equipment can typically only distinguish themselves from their competitors based on how well they perform their marketing, sales, installation, and maintenance functions. If the BTC is prohibited from doing any of those functions for customer premises equipment manufactured by its affiliate, then it has no way to distinguish itself. This produces no benefit to the American economy.

C. The prohibition on joint research and development could greatly diminish the value of Bellcore, one of America's important centers of industrial research

Under the provisions of the decree, the Bell companies can jointly sponsor research activities at Bellcore. Bellcore is an important national asset and is one of the leading industrial research organizations in the nation. The provisions of this paragraph may make the continuation of that outstanding joint effort a prohibited activity resulting in a greatly diminished role and standing for Bellcore.

The best remedy is to delete this paragraph entirely. The separate subsidiary requirements provide all the protection needed against cross subsidies, while still allowing each entity to perform the set of activities that are appropriate.

5. The 90% equity rule serves no useful purpose

On page 4 lines 1-2, there is a requirement that no more than 90%

of the equity in a manufacturing organization can be held by a BTC. As mentioned earlier, the manufacturing relief, and therefore equity ownership, should be available to the BTCs and their affiliates. The 10% minority ownership provides no additional safeguards to the public or to competitors. Other sections of the bill already require full financial disclosure, and that the business entity issue its own debt which will also require public reporting of the business unit's activities. In the event that passive investors are not particularly interested in manufacturing, the BTCs may have to sell this minority interest at unrealistically low prices which would penalize their shareholders.

The best remedy is to delete this paragraph which adds nothing to the safeguards and introduces an unnecessary additional risk into an already risky business.

6. The definition of "telecommunications" puts unnecessary restrictions on what the manufacturing business unit can make

On page 6 beginning at line 20 and continuing through page 7 line 3, the term "telecommunications" is defined. The definition picks up some language which is used in the consent decree that does not presently concern the BTCs because they can neither manufacture nor provide telecommunications equipment. Specifically, line 24 of page 6 includes the "... without change in form of [sic] content ...." requirement. While this is a decree restriction on what lines of business the BTCs and their affiliates can presently enter as they provide services to their customers, it has no place in these new guidelines allowing manufacturing. Including this language in the definition of "telecommunications" and then including the definition of "telecommunications" in the definition of "telecommunications equipment" has the effect of telling the manufacturing business unit that it cannot make a piece of equipment that alters form or content. None of the bill's purposes is served by precluding a BTC's manufacturing business unit from being able to manufacture and provide equipment that would alter the form or content of information to some other company that is not under the decree restrictions. The decree restriction is on the provision of the service, not on the making of the equipment which allows someone else to provide the service or make the translations for their own benefit.

The remedy is to delete any reference to the decree restrictions on content generation or alteration. Indeed, since the BTCs are presently only restricted from the manufacture of telecommunications equipment and customer premises equipment and are already free to manufacture everything else, one approach to the bill is to simply say that affiliates of BTCs can manufacture anything they choose.

7. The domestic content requirements of the bill are counterproductive to the bill's purposes, and will not benefit the American public nor strengthen the economy

On page 3 lines 22-25, there is a requirement that all work including the manufacture of components be conducted in the United

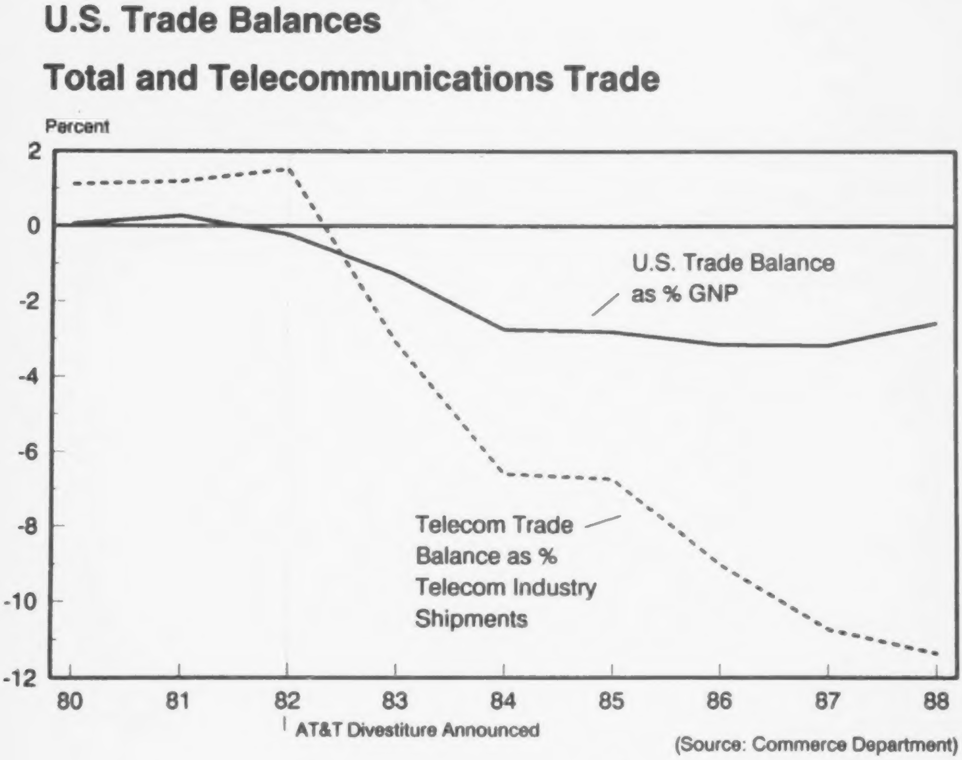
States. While this is a worthy goal, there are a number of components that simply are not made in the United States. The BTCs cannot single-handedly reverse major international trade patterns.

The provision as written will be counter-productive. If every single component could not be of domestic origin, a BTC would have to forego manufacturing an entire product line. In that case it would have to purchase from a supplier which is not subject to any domestic content requirement at all and American jobs and trade would wind up worse off rather than better off.

A possible solution to this problem would be to allow the BTCs and their affiliates to manufacture in the same manner as manufacturers in like industries in the United States. For instance, the bill could require that the BTCs or their affiliates perform their manufacturing with the same percentage of domestic content and labor as the average of all U.S. manufacturers of like equipment. This would provide the BTCs with an incentive to get into the manufacturing business, which would enhance the opportunity to fulfill the bill's purpose of strengthening the American economy.

ATTACHMENT B

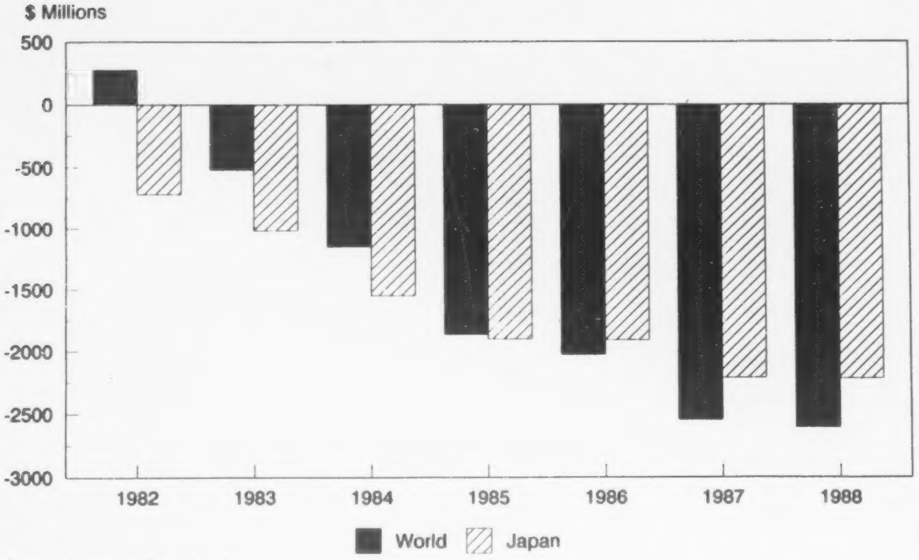
Figure B-1



(Source: Commerce Department)

Figure B-2

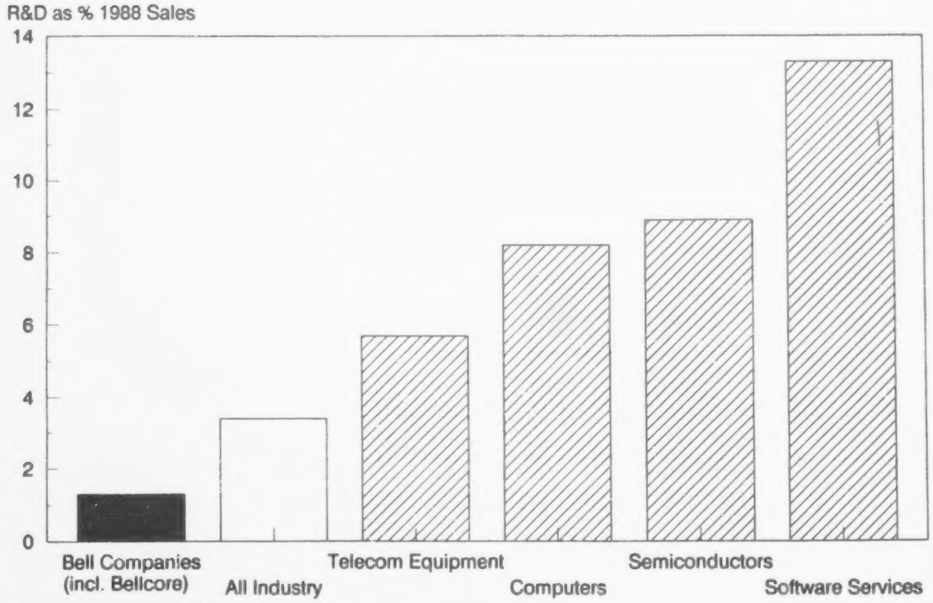
U.S. Telecommunications Equipment Trade Balance With World and Japan



Source: Commerce Department

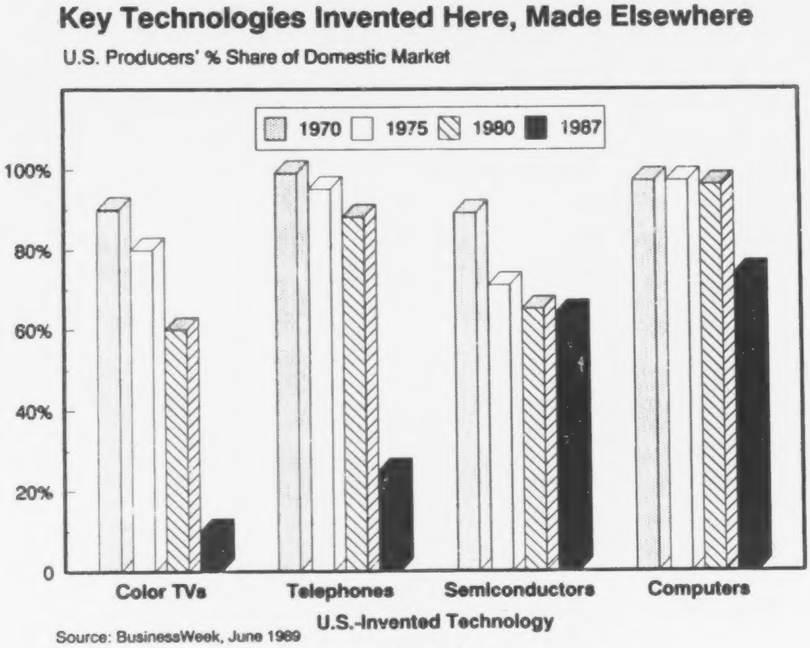
Figure B-3

R&D Spending by U.S. Information Industries



Source: BusinessWeek, "R&D Scoreboard," June 1989

Figure B-4



Key Technologies Invented Here, Made Elsewhere

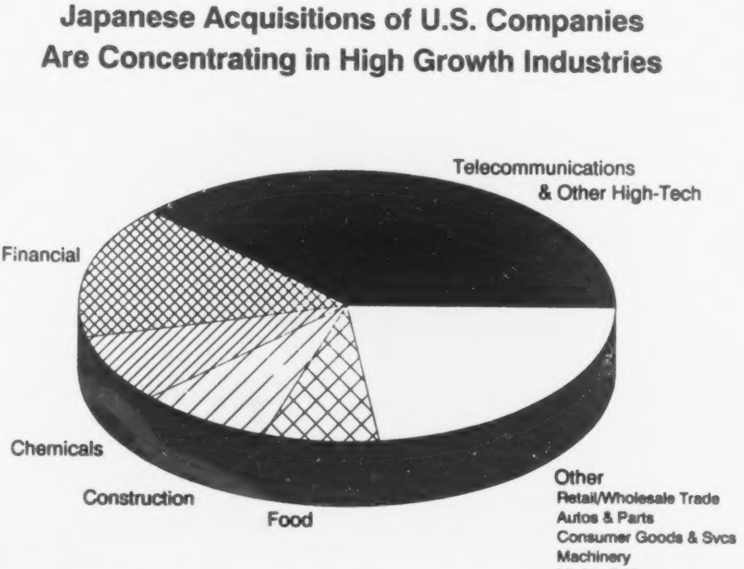
U.S. Producers' % Share of Domestic Market

Source: BusinessWeek, June 1989

Attachment C

Foreign Investment In the U.S. Telecommunications Industry Since AT&T's Divestiture

Figure C-1



Japanese Acquisitions of U.S. Companies Are Concentrating in High Growth Industries

Source: Ulmer Brothers, Inc.
1989 Top Industry Preferences

Figure C-2

Examples of Foreign Company Activity in U.S. Markets Closed to the Bell Holding Companies

Company	*Country*	*U.S. Business Activities*
Hitachi	Japan	- manufacturing computers and telecommunications equipment
Matsushita	Japan	- manufacturing electronic and communications equipment
Fujitsu	Japan	- research and development of digital central office switch technology - manufacturing communications equipment
NTT	Japan	- data communications services - fiber optic hardware
NEC	Japan	- manufacturing computers, semiconductors, communications equipment, and integrated systems - research and development of communications systems software and home information systems technology
KDD	Japan	- telecommunications products and services - secure computer, communications, data centers - packet switch network, value-added network services
Nintendo	Japan	- interactive information service network
Recruit	Japan	- information management and telecommunications services
Toshiba	Japan	- manufacturing telecommunications equipment
Siemens AG	W. Germany	- manufacturing of wide range of telecommunications/automation equipment - communications research and development
Deutsche Bundespost	W. Germany	- marketing videotext - packet switch network, value-added services

Company	*Country*	*U.S. Business Activities*
France Telecom	France	- long distance data communications - videotext information and directory services - packet switch network, value-added network services
Groupe Bull	France	- manufacturing computer equipment
Alcatel NV	France	- manufacturing telecommunications equipment
British Telecom	U.K.	- electronic database/information services - nationwide value-added network - computer/communications systems integration and equipment manufacturing - interLATA automatic cellular services
Cable & Wireless	U.K.	- long distance telephone service throughout U.S.
Hawley Group	U.K.	- remote electronic security services
L.M. Ericsson	Sweden	- manufacturing of communications equipment - integrated communications network systems - digital public mobile data network
Elsevier	Netherlands	- electronic and traditional publishing; U.S. government/congressional information online databases
VNU BV	Netherlands	- electronic and traditional publishing; U.S. business and financial databases
N.V. Philips	Netherlands	- manufacturing of electronic/microelectronic equipment and components
Thyssen-Bornemisza	Monaco	- electronic publishing/information services; U.S. business and defense information databases
Int'l Thomson Org.	Canada	- electronic and traditional publishing; on-line financial database and equity research network - software development for institutional investment community

Source: Compiled by BellSouth DC from Various Annual Reports and Trade Publications

Figure C-3

Foreign Companies Are Doing What American Companies Cannot

Examples of Foreign Activity in U.S. Markets
Closed to the Bell Holding Companies by the MFJ Restrictions

- HITACHI (Japan), is implementing strategy designed to significantly increase its information systems manufacturing base in the U.S. Is manufacturing computers and telecommunications equipment in several facilities around the country, and has plans to begin extensive research and development activity by 1990s.

- MATSUSHITA (Japan), operates eight plants in the U.S. and expects to add more. Since 1983, has developed/acquired U.S. facilities to produce cellular mobile telephones, pagers, and computer systems components.

- FUJITSU (Japan), has recently made commitment to capture share of U.S. digital central office switch and ISDN terminal equipment market. Has been running U.S. trials on terminal equipment since 1986 and purchased U.S. computer peripheral maker Intelligent Storage in 1988. A Fujitsu digital switching system is currently undergoing beta testing for U.S. market compatibility. Fujitsu's Business Communication Systems Division recently won 10 year, $17 million contract to build integrated telecommunication system for California State University at Fresno.

  Fujitsu has six research and development centers as well as communications equipment manufacturing facilities in the U.S. Began construction in Fall 1989 of $80 million telecommunications plant in Richardson, Texas scheduled for completion in 1992. New plant will be base for all Fujitsu North America's communications equipment manufacturing operations; will employ up to 4,500 by year 2000. Fujitsu wants to increase its product demand in U.S. from 20 percent to 50 percent by 1992.

- NIPPON TELEGRAPH & TELEPHONE (Japan), Japan's domestic telephone company, announced its entrance into rapidly growing $40 billion U.S. data communications services market in February 1990. Subsidiary, NTT Data Communications Systems Corporation, has opened offices in Jersey City, NJ; initial target will be Japanese companies doing business in U.S.; future targets are likely to be U.S. companies. NTT Data will manage data transmission facilities, office phone systems, and develop private data network software for customers. Project is NTT's largest investment in U.S.; will initially be about $100 million. NTT Data employs 7,000 worldwide and had 1989 revenues of $2.7 billion.

NTT also owns over 50 percent of NTT International which established Dynamic Loop Corporation in Delaware to invest in communications projects in U.S.

NTT is also the major investor in Alcoa Fujikura, a Spartanburg, S.C. joint venture that produces fiber-optic hardware for assembling communications networks.

- NEC (Japan), has about 8 percent of North American office telephone switch/equipment market. Is dedicated to worldwide development of products and services that integrate computer and communications technologies. Operates four manufacturing plants in U.S. and in 1988 increased the capability of its specialized semiconductor design centers and added new facilities for developing communications systems software and home information systems technology. Opened new research facility in Irving, Texas in November 1989; Advanced Switching Laboratory will develop broadband hardware and software for central office and customer premises equipment.

- KOKUSAI DENSHIN DENWA (Japan), established first U.S. subsidiary to market telecommunications products and services to American firms in Fall 1989. In addition to seeking new business, KDD America will coordinate operations of Telehouse International, New York-based firm of which KDD is largest shareholder with 25 percent. Telehouse is leading provider of super-secure, disaster-proof computer, communications, and data processing centers to the financial industry. It recently opened second facility, a $35 million center on Staten Island. (Except for 12 percent interest purchased by AT&T in May 1989 the rest of Telehouse is held by other Japanese firms.) KDD is also part owner of Infonet, California-based packet switch network company that provides value-added network products and services to global data communications market.

- NINTENDO (Japan), is developing interactive videogame and information service network for introduction into U.S. market by 1991. Network would link already popular Nintendo Entertainment System (NES) videogames for long distance game playing and access to other information services. Users would access main computer and software from anywhere in U.S. AT&T is expected to be partner in venture.

- RECRUIT COMPANY (Japan), provides information management and telecommunications services in New York City area through subsidiary Recruit USA. Operates super-secure, disaster-proof data service centers in Newport, NJ and Staten Island serving customers primarily in the financial and banking industries. Dedicated fiber-optic network links centers to Manhattan.

- TOSHIBA (Japan), will begin to manufacture telecommunications equipment for U.S. market in Irvine, CA beginning in October 1989. Decision to move manufacturing from Japan is largely effort to avoid imposition of import duties if company is named in anti-dumping suit currently pending at Commerce Department. Toshiba added 103,000 square feet to its plant in Irvine to accommodate manufacture of PBXs and key systems.

- SIEMENS AG (W. Germany), has launched concerted effort to increase its presence in U.S. by acquiring over 30 U.S. companies. Is concentrating on five high-growth areas: factory automation, office automation, telecommunications, semiconductor technology and diagnostic medical equipment. Major communications deals: purchased 80 percent interest in GTE's Communication Systems' Transmission Product Division (1986); acquired, for $165 million, full control of Tel Plus Communications, the largest U.S. independent interconnect company (1987); paid almost $1 billion for ROLM, IBM's telephone equipment manufacturing arm (1988). Purchase of ROLM increases Siemens' share of North American office-telephone equipment market from about 4 percent to over 20 percent; almost doubles its share of world market. Efforts to increase share of U.S. digital central office switch market are backed by 500-engineer research facility devoted to specialized software development.

- DEUTSCHE BUNDESPOST TELEKOM (W. Germany), will open U.S. office to spearhead effort to transfer its already successful German videotext and value-added network services to U.S. market. Is part owner of Infonet, California packet switch network company that provides value-added network products and services to global data communications market.

- FRANCE TELECOM (France), provides long distance data communications through Minitel Services Company (MSC is joint venture between Minitel USA and Infonet); MSC's "videotex network" is slated to eventually serve 150 cities in U.S. and Canada. Through U.S. subsidiary Minitelnet, France Telecom is offering over 10,000 videotext information services to U.S. including electronic directory services it publishes.

- ALCATEL NV (France), is launching strategy to develop and market intelligent network products worldwide. Gaining ground in American market is Alcatel's top priority; plans to reenter U.S. public switching market with broadband ISDN technology in mid-1990s. Recent acquisition of U.S. fiber and cable business makes Alcatel third largest supplier in U.S. In late 1987, Alcatel NV began manufacturing key systems and PBXs in Corinth, Mississippi.

- GROUPE BULL (France), agreed to purchase Zenith Data Systems for up to $635 million. Zenith Electronic's successful computer unit, Zenith Data Systems had 1988 sales of $1.4 billion; is largest seller of battery operated laptop computers in U.S. Acquisition will make Bull largest European computer company; it will gain market share in U.S. and Europe and be positioned to compete on global scale.

- BRITISH TELECOM (U.K.), wants to become leading information services company in U.S. by providing videotext and other information services through BT-Tymnet, company formed by consolidation of BT's Dialcom unit and recently purchased Tymnet. Dialcom, Rockville, MD-based operation with marketing arms in U.K. and continental Europe, was purchased from ITT in 1986 and ranked as third largest e-mail provider in U.S. in 1987. BT has invested over $40 million to add new databases and advanced e-mail services to

Dialcom service. It has enhanced service offerings by linking its U.S. and U.K. data centers via long distance communications; arrangement allows BT to offer all services to all users (whether in U.K. or U.S.) without incurring cost of duplicating software or databases. Dialcom counts among its customers the U.S. Congressional Correspondence System which provides electronic mail service to the Hill.

In July 1989, BT reached agreement with McDonnell Douglas to purchase Tymnet, the second largest U.S. provider of value-added network services with annual revenues of about $250 million. Purchase price is reportedly $355 million. The acquisition of Tymnet will give BT a vast U.S.-based network linking over 750 U.S. cities and more than 30 countries. In addition to the network, sale also includes McDonnell Douglas' e-mail and electronic data interchange systems, which will substantially strengthen BT's already formidable position in the U.S. electronic services market.

BT is also aiming to penetrate North American computer/communications systems integration market. It plans to develop, manufacture and market broad range of data communications equipment through Herndon, VA based subsidiary BT Datacom. (Formerly Mitel Datacom, unit of Mitel, Canadian company in which BT has 51 percent interest). Products will include fiber optic LANs, computer integrated telephony products, PCs and terminals. BT is backing entry into U.S. data communications market with over $20 million research and development effort.

BT's purchase of 22 percent stake in McCaw Cellular Communications Inc. will give it access to 30 percent of U.S. mobile communications markets, including cellular radio, paging and digital cordless communications. Through this venture BT will be able to offer statewide automatic cellular services, a service BOC cellular operations cannot provide, at considerable competitive disadvantage, due to MFJ interLATA restrictions. Also purchased 80 percent of Metrocast paging from Metromedia Telecommunications and plans to spend over $21 million in system expansion, operations and marketing plans.

- CABLE & WIRELESS (U.K.), provides long distance telephone service throughout U.S. through owned and leased facilities. By almost doubling capacity of U.S. portion of its "Global Digital Highway," Cable & Wireless has coast-to-coast network that is more than 90 percent fiber optic and has access to 80 percent of U.S. business population with equivalent of 27 million miles of high quality circuit capacity. Long distance traffic over this network increased by 21 percent to over 630 million minutes. In December 1989, C&W will begin 100 percent digital end-to-end private line service in California for in-state data transmission. Company has been targeting services primarily to business customers, but plans to begin marketing more aggressively to residential customers.

- HAWLEY (U.K.), paid $715 million for American District Telegraph (ADT), leader in U.S. security products and services (including remote electronic security information services).

- L.M. ERICSSON (Sweden), has assets in U.S. of only about $320 million but has about 5 percent of U.S. PBX equipment and multiplexer market and is aiming for 10 percent. Ericsson is becoming player in integrated communications systems business. In Spring 1989 was awarded $3 million contract to install integrated voice and data transport network for State University of New York health center; other installed systems include California State University and University of Massachusetts.

  Ericsson is very active in U.S. market for cellular system infrastructure equipment, primarily switching. In 1989, formed joint venture with GE to produce cellular phones, mobile radio products and Mobitex mobile data communications systems. Venture is 60 percent owned by Ericsson, 40 percent by GE. In late 1989, Ericsson established new company, Ericsson Mobile Data, Paramus, NJ, to supply, install and maintain Mobitex system. Ericsson is partner in American Mobile Data Communications venture to build and operate first nationwide 2-way all-digital Mobitex mobile radio network, linking top 50 U.S. specialized mobile radio systems.

- ELSEVIER (Netherlands), owns several traditional and electronic publishers in U.S. Holdings include Congressional Information Service, which specializes in U.S. government and congressional information publications and databases, and real estate data companies Real Estate Data and Damar. Growth of U.S. operations (32 percent increase in American publishing revenues between 1987 and 1988) prompted formation of two new business groups: Elsevier Information Systems and Elsevier Business Press.

- VNU BV (Netherlands), owns Disclosure, one of largest and most widely available U.S. business information database publishers.

- N.V. PHILIPS (Netherlands), generates 20 to 30 percent of total revenues through U.S. sales, mostly of consumer electronics. Plans to aggressively increase its stake in U.S. to about 50 percent by concentrating on improving its standing in information technologies markets; will increase already significant U.S. manufacturing base accordingly. Philips is largest European manufacturer of semiconductors and has healthy stance in U.S. market via acquisition of Signetics.

- THYSSEN-BORNEMISZA INC. (Monaco), owns Predicast, one of largest and most comprehensive U.S. business and defense information database publishers.

- INTERNATIONAL THOMSON ORGANIZATION LTD (Canada), established presence in U.S. business information services market through acquisition of U.S. service and software firms. In 1986, acquired Business Research Corp, developer of InvesText and First Call (leading on-line financial data base and equity research network) and Technical Data Corp., publisher of financial information and developer of software for institutional investment community. Companies are grouped with other holdings under "International Financial Networks Group" known as "Infinet."

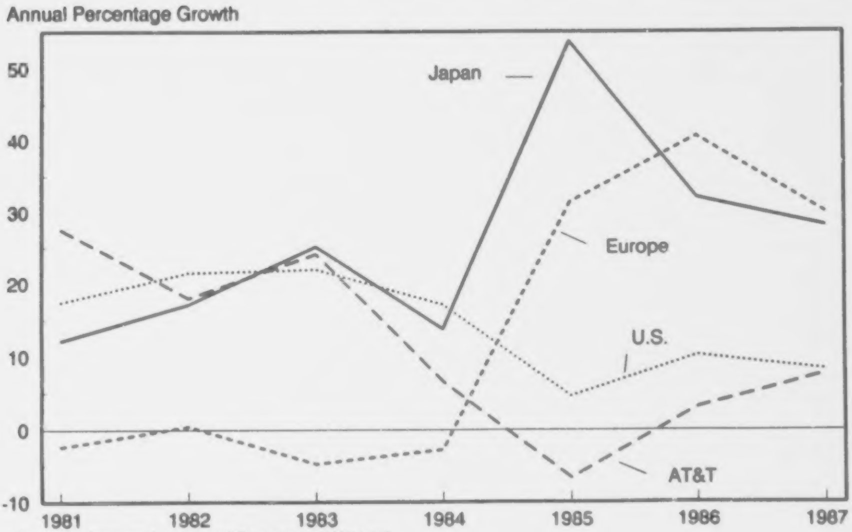
Source: Compiled by BellSouth DC from Various Annual
Reports and Trade Publications

Attachment D

R&D Spending By U.S., European and Japanese High-Tech Firms Since AT&T's Divestiture

Figure D-1

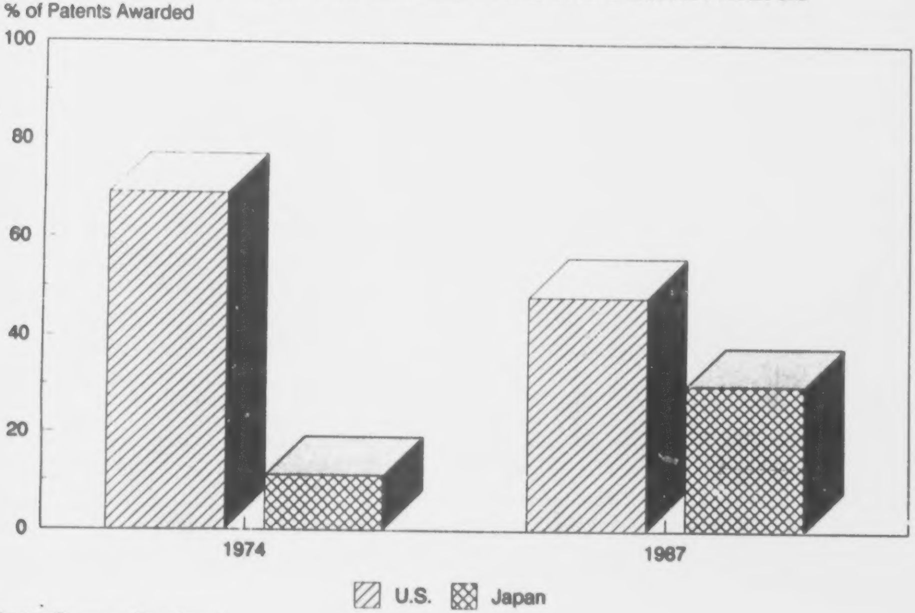
Growth in High-Tech R&D Spending



Sources: Compustat, Annual Reports and Michael Noll, "Bell System R&D Activities,: Telecommunications Policy, June 1987

Figure D-2

Trends in U.S. Telecommunications Patent Awards



Source: Commerce Department

Senator INOUYE. Thank you very much, Mr. Clendenin. May I call upon the Chairman of the Committee, Senator Hollings.

Senator PRESSLER. Could we ask just a couple of questions at this point?

Senator INOUYE. We are going to have questions now.

Senator PRESSLER. Oh, good.

The CHAIRMAN. Mr. Clendenin, it is obvious we agree. The question would be put if you are a common carrier and making so much money that you want to manufacture, why do you not lower your rates?

Mr. CLENDENIN: We have done everything we can to keep rates down and intend to continue that process, Senator, and the fact that we are interested in getting into the efficiencies of the manufacturing process would help in that procedure.

The fact is the process now is not an efficient one. There is a lot of trial and error in the development of equipment for us because we cannot be part of the process. That costs telephone users in the form of the costs of doing business. And I think arguably, an enablement which would permit us to be part of the process would help us keep rates down.

The CHAIRMAN. What about research? Have you not got BellCore? Is that not adequate? You are doing research now, so what is the problem?

Mr. CLENDENIN. Here again, the research that BellCore is enabled to do for us, since it is controlled by the same restrictions that control us, is very generic in nature. It is not very specific, and it is not permitted to go into the kind of research relationships with small companies that I described in my two examples earlier.

It is controlled by the same restrictions that we are controlled by. It is a creature of the seven BHCs. So BellCore is not an avenue to the kind of research that we are talking about because it has the same restrictions overhanging it.

The CHAIRMAN. The accounting system, now will you describe for the committee the accounting system that you would work under? In other words, the divestiture, the Modified Final Judgment and the antitrust suit resulted because the FCC tried every way in the world to make AT&T operate under an accounting system without success. And the scholars never have decided whether long distance was subsidizing the local or local long distance. I hear that argument still.

What accounting system do you envision that would really prohibit the cross-subsidization of your manufacturing activities?

Mr. CLENDENIN. I think those accounting systems are, essentially, already in place. I think that in the last few years, the sophistication of the accounting systems at both the Federal and state level has been focused very directly on the process of avoiding any cross-subsidies.

Go back to the Computer Inquiry III process and the changes that were made as a result of that. I think that you will find that the FCC has aggressively pursued establishing an accounting separation which makes it clear where every dollar comes from and where every dollar goes. And I think that is replicated largely at the state level as well.

So I would say that the type of accounting systems that are necessary to accomplish what you are concerned about have already been put in place and can be expanded to accommodate these changes without any question.

It is much more sophisticated, and there are fewer debates about it than there used to be, Senator.

The **CHAIRMAN**. Thank you, Mr. Chairman.

Senator **INOUYE**. Senator Pressler?

Senator **PRESSLER**. Thank you very much.

As one who does not have a defined position on this legislation, I am listening with great fascination.

Now, my main concern are the telephone subscribers in South Dakota. How would this improve the services available to that telephone user, and would it cost him more or less? Would it just cost him more in higher rates to subsidize the marketing arm?

Could he expect rate reductions? I guess most people look upon the telephone company as in the business of supplying telephone service, so I am concerned about the fellow dialing the phone.

What will this do for him?

Mr. **CLENDENIN**. Let me go right back to the subsidy issue. There is not going to be any subsidy for these kinds of endeavors from the rate payers. These kinds of endeavors are going to be financed by the shareholders, and they are going to have to stand on their own bottom.

Now if these kinds of endeavors produce new products that offer a wider array of services to the folks in South Dakota, then I think that is a benefit. If this kind of close linkage in the manufacturing process reduces cost and introduces efficiencies, that can be passed through to the users in South Dakota.

So I think that all of these things are ultimately liable to benefit the telephone users very, very directly.

Senator **PRESSLER**. So you would anticipate that our approving this would make more telephone service available at cheaper rates?

Mr. **CLENDENIN**. Let me give you an illustration from your part of the country. We talk a lot about the software development. I mentioned that several times, and I have also mentioned the fabrication. The company that serves out in your neck of the woods, U.S. West, has done some very innovative thinking about how to better serve people who have hearing handicaps.

They believe that they have both the hardware notion and the software notion to bring a product forth which would directly affect and help those people. But they are both restricted on the manufacturing side, and on the information services side, from pursuing that idea.

Now I think that is just illustrative of the kind of dynamics that are involved here.

Senator **PRESSLER**. I was fascinated when you said that even your software is considered a product that you cannot do. Now——

Mr. **CLENDENIN**. Manufacturing, if it has to do with the core network, yes, sir.

Senator **PRESSLER**. Now did BellSouth ask for a waiver for manufacturing its software?

Mr. **CLENDENIN**. I think all the Bell operating companies have explored the degrees to which the court's interpretations on software would permit them to move into this area, and it was in fact in the course of ruling on the "manufacturing" definition that the court did define manufacturing to include what we think is a terribly broad definition of manufacturing, coming all the way back into the development of software for the core network, to support switches that we already own.

Senator **Pressler**. How has our telecommunications balance of trade fared since the break-up of AT&T?

Mr. **Clendenin**. Well, the low end of the market and by that I mean the telephone instruments themselves, of course, has gone largely the way of the consumer electronics market in this country. It has essentially been taken over by foreign manufacturers. And American manufacturers who are continuing to compete in the low end of the market, like AT&T, do a great deal of their telephone instrument manufacturing overseas. That is just the nature of the low end of the market.

I think the switch side of the market is still a very strong balance in our favor in this country, but I would tell you that it is very clear to us that the next wave of interest that we will see from foreign manufacturers is to directly attack that large switch market. We are seeing the early signs of that already.

There has been a notion, Senator, and I guess this might give me a chance to comment on it, that if we were given freedom to participate in the manufacturing arena, that we would suddenly all rush out and align ourselves with foreign manufacturers. And I think that is really a very false premise.

That notion got its way into some studies that were made recently, that I think the Department of Labor projected job loss on, and it really is a crazy notion.

Let me give you some figures to illustrate that. I have some 1988 figures here, and I just did this in pencil on the plane so you will have to accept it as pretty raw. In 1988, we purchased, that is BellSouth—just my nine-state company—purchased $1.793 billion worth of telephone equipment. That includes only telecommunications equipment, such as switches, cable, fiber optic cable, transmission equipment, et cetera—not data processing equipment, not computers for our billing process.

Of that $1.793 billion we purchased 79 percent from American manufacturers: $1.417 billion. We purchased another $300 million from foreign manufacturers who manufacture the product in the United States. So that takes you to way up in the 90 percent category. So the notion that somehow all of this is going to push into a further onslaught of job loss and that we are all going to run out and join hands with foreign manufacturers, I do not think is really defended by the facts and the history.

Senator **Pressler**. Well, I suppose that in our country it has come to be a standard of living to have a telephone that works, that you can get reasonable rates for long distance, and as elected public officials we are expected to be a part of maintaining that. And I suppose that the general public has the impression that the telephone company provides telephone service; it can probably do other things, provided that that does not get neglected. I think that is a concern of people such as myself.

My last question is, is there any analogous example in Europe, and I know that you cannot make analogies, but do the telephone companies there who provide basic telephone service, are they involved in other manufacturing and so forth, as you are proposing?

Mr. CLENDENIN. They most assuredly are, but they also are in this country. There are no manufacturing restrictions of this type that stop General Telephone from providing both manufacturing and telecommunication service, and I do not know of any that would stop United, if they had a manufacturing arm, or Cincinnati Bell, if they had a manufacturing arm, or SNET or ALTELL or any of the others.

The only ones that these kinds restrictions apply to are the seven BHCs.

Senator PRESSLER. Thank you, Mr. Chairman.

Senator INOUYE. Thank you.

Senator Breaux?

Senator BREAUX. Thank you very much, Mr. Chairman, and thank you, Mr. Clendenin, for your presentation.

Let me ask, the two basic arguments that I have heard in opposition to Senator Hollings' bill on manufacturing is first the cross-subsidization problem, and second, the concern about preferential treatment or the so-called self-dealing that might occur if the bill was to be adopted.

Now, the RBOCs have about 80 percent plus of the local telephone service in this country and have a substantial impact on the users in this country. What would prevent your companies from essentially deciding to design the equipment so that only your subsidiaries would be able to manufacture it? In other words, how do we prevent you from ensuring that the only equipment your people are going to buy is from your own people?

Mr. CLENDENIN. The whole regulatory process, Senator, focuses on putting the most efficient—from a cost-effective standpoint and from a service performance standpoint—the most efficient equipment into place.

There are a lot of benchmarks available today. In addition to the safeguards that I mentioned earlier that would prevent cross-subsidy, there are a lot of benchmarks. There are a lot of manufacturers offering products. If a Bell company tried to set up a captive manufacturer and buy only from that source, in light of all of the competitive benchmarks that exist today, that price and that efficiency and that quality better be there or they are going to get blown out of the water.

Senator BREAUX. Would it not always be in your company's interest though to buy from a subsidiary that you are helping to finance or making loans to——

Mr. CLENDENIN. Not in the regulatory environment that we live in and that is part and parcel of the industry, Senator, because the regulators, if they found that you were buying a product which could not—the choice of which could not be defended from an efficiency and cost standpoint, they would just disallow it in the regulatory process.

Senator BREAUX. Suppose you have designed a product that you need such as—which only your subsidiary could manufacture?

Mr. CLENDENIN. I cannot conceive of that type of product, number one, because there is no lock on technology. The race today is so fast that any technology that comes on line is replicated in a variety of ways by other competitors.

So I cannot conceive of that lock that you are talking about, but I think the regulatory process would quickly identify it, and it would just be absolutely not defensible and would not stand. And the availability of benchmarks is clear today in a way that was not true in the old Bell system.

When the old Bell system existed there really was not an array of other manufacturing alternatives that you could benchmark against. Today there most assuredly is.

Senator BREAUX. Can the RBOCs manufacture and sell overseas?

Mr. CLENDENIN. We can engage in manufacturing overseas if we can make it very clear and evident to the court that none of that product would come back into this country.

Senator BREAUX. Have you done that?

Mr. CLENDENIN. No, we have not. We have not engaged in any manufacturing overseas. We have invested in the research on the software side of an American company's product that is being sold to the Bundespost in West German, but it is an American company that is competing for a piece of the West German marketplace, and we have a software orientation on that.

Senator BREAUX. If manufacturing is such a good idea, why have you not tried to enter into the foreign markets?

Mr. CLENDENIN. Well, we have not seen that we could really attack the foreign marketplace. We are not manufacturers, Senator.

Senator BREAUX. But is that not what this is all about?

Mr. CLENDENIN. We really do not know how to fabricate, and how would we really prevent that product from coming back into the United States? That is very difficult to do.

Senator BREAUX. You say you are not a manufacturer, is that not what this hearing is all about?

Mr. CLENDENIN. What we are talking about is wanting to become a part of the manufacturing process. When we were separated from AT&T, all of the manufacturing talent went with AT&T, and understandably so. We did not retain any of that talent.

We want to be part of the manufacturing process. We want to be part of the research process, and we think over time we can bring a great deal of skill to the game. We know the telecommunications market. We can apply that skill in the design of products that manufacturers can produce effectively.

We can fund the capital requirements for those products and bring them to our customers.

Senator BREAUX. I appreciate that answer. I do not want to belabor the point because my time is so short. I do not disagree with what you are responding.

On Page 10, you apparently try to make a case that the RBOCs have had problems with their vendors of equipment, that, in essence, the vendors are jerking you around, that they delay delivering, that they force you to accept new designs and new things that you may not be interested in accepting in that particular fashion.

You say there does not seem to be any interest in giving us the software with any dispatch and that they might want to convince us to buy another switch or another new computer that they have built.

I would imagine that the AT&T folks would say, look, if you do not like what we are doing, there are 100 other companies out there. Go buy from somebody else. What is your response to that?

Mr. CLENDENIN. But you cannot, you see. You have already got your investment in an AT&T switch or somebody else's switch. It is sitting there. What we are talking about here is adding software features which bring new services out of that switch to the customer, and if we cannot get a fast reaction from the people who built that switch we cannot get it done because we are not permitted to develop that software ourselves even if we had the specifications from the manufacturer to help us. We would not be permitted to by the court.

So we are really talking there about a software kind of a situation, where we have already got the investment in that switch, and we want to bring new services out of that investment that are being asked for by our customers, business or residence, and we go to the vendors and say look, this is a service our customers are asking for. Will you develop it for us? And we are really at their mercy in terms of the timing of that development because we are restricted from doing it ourselves, and they know it.

Senator BREAUX. My final question will concern the question of cross-subsidization. You indicate that a system can be designed to ensure that it does not occur. Would you consider the NYNEX example—where $100 million or so found their way into the regulated base, that the FCC said were not proper charges,—an example of how the FCC's audit procedures are working or how the system is not working?

Mr. CLENDENIN. I think it is a good example of how the system does work. I think that the fact that it did work is plain as day here. I am not familiar with the details of the NYNEX case, and I really do not have any comment on it, but I think it is self-evident that the system worked by virtue of what action the FCC took.

Senator BREAUX. Thank you, Mr. Chairman.

Senator INOUYE. Thank you very much.

Senator Gorton?

Senator GORTON. Mr. Clendenin, I want to ask you a couple of questions about the example you set out on page 4 of your testimony, the company called CXC. Is it the thrust of what you are saying here that the United States and the competitiveness within the United States would be better off if you owned and controlled the CXC company than it is when that company is financed elsewhere and is owned by someone else?

The second part of that question, is it your implication that we would be better off without foreign capital in enterprises like this in the United States and with you having shifted capital to the owning of a manufacturing company, rather than, as Senator Pressler said, spending that capital on improving the retail service to your customers and/or lowering their prices?

Mr. CLENDENIN. No, I think the short answer is that the point is not at all that. I said also in my testimony, Senator, that I recognized this is a global economy. And I think that is a reality that is positive for the United States, because it means we can participate actively in attacking that global economy, just as they can participate actively in coming in here.

What I was trying to point out with a couple of examples, and I could provide you many, many more, is that all of the seven BHCs have been approached time and time and time again by small American companies who are starved for capital. If they could get the capital elsewhere in the United States, believe me they probably would have done that before they came to us. But they are starved for capital and they are looking at us as a possible resource for capital, to either fund additional manufacturing capabilities or R&D work or whatever and we have got to say, we cannot even talk to you.

Do we think that if we had come in and been able to fund some of the R&D for IMM, which is General Hillsman's company, that we would have taken it over? No, but we would have been able to participate in the development of cellular radio, which is going to be a very important element in rural America because he was attacking the cellular radio problems as they apply to rural America.

Now would we be owning IMM now if we had done that? Absolutely not, but we would have been able to fund research and development which we then would have been able to enjoy perhaps some royalties from, if the product succeeded. Now, maybe nine out of those 10 products that we might fund are going to fail, but the tenth one might succeed and bring a service to our customers.

We were interested in that project. We wanted it because we serve a great deal of rural America, and we could not participate actively in it. And I am just trying to illustrate that it seems to me ironic that these American companies cannot find us a source of capital and are so frustrated that they ultimately have to run to other sources of capital overseas. IMM that I mentioned here has already got a 10K out that is seeking financing overseas.

I think if you look at the ownership of the intellectual property of CXC, the one you asked about, you will find it is now shared by the French and the Swiss and the Japanese. They own that intellectual property.

So, I am just illustrating that these are the kinds of things that are taking place and how ironic it is that we can participate not at all and foreign companies can come in and participate with a totally free hand.

Senator GORTON. I understand that illustration. I am still wondering about the implications. Even you, as strong and powerful and well capitalized a company as you are, have a limited amount of capital.

Mr. CLENDENIN. Absolutely——

Senator GORTON. Presumably, if you invested in these companies you would not have used that capital for some other purpose. So why is that Mr. Pressler's, or your equivalent of Mr. Pressler's customers, would be better off with your capital going into organizations, which obviously found that capital some place else, rather than into your present business of providing retail telephone service to those customers?

Mr. CLENDENIN. Senator, we are not one bit stingy with our present business. My construction program in the nine southeastern states is in excess of $3 billion a year. We have not had a rate increase case filed for more than five years. So we are not stingy with providing telephone service. We are deploying technology as rapidly as we can, even in small town America.

We have taken the electronic age to communities that you could not even find on the highway map, and we intend to continue doing that. We are not pulling away from our telecommunications business at all to try to explore new services and new technologies. Not one whit. So I do not think it is fair to even draw the two into the same question.

What we are talking about really is not going to detract from providing telephone service. As a matter of fact, as I have tried to argue, if it speeds up the access to new services, if it broadens the array of services, if it makes more flexible opportunities available to telephone customers, and if it, at the same time, enhances American competitiveness and tecnologically, I think it is a win-win-win, and that is what we are arguing for.

Senator GORTON. You have concentrated, not only in your formal testimony, but in this answer to me, on telecommunications equipment. Is BellSouth interested in other manufacturing: video equipment, electronic components, other types of manufacturing entities? Or is your interest solely in telecommunications equipment?

Mr. CLENDENIN. I cannot speak for the other six. I can only speak for BellSouth. As a policy, we made a judgment several years ago—we have announced it to our shareowners time and time again—that we are going to concentrate on telecommunications because that is what we know best.

I had my annual meeting yesterday in Memphis, and I told the shareholders exactly that. That is a policy we set out before we started this company. We have said it again every time we meet with the shareowners, and I said it again yesterday as I spoke to them in Memphis—or, I am sorry, Monday—as I spoke to them in Memphis.

So we are sticking to telecommunications because that is what we know best. And we have sort of said, telecom related things are the things we are interested in.

Now having said that, the information age is exploding, and the definition of what the information age is, and how telecommunications is part of that, changes every day. It will be different tomorrow morning when we come to work.

So I do not want to say that that is a static kind of a thing. Quite the opposite. But we are sticking to telecommunications and that has been BellSouth's approach ever since we started.

Senator GORTON. Thank you, Mr. Chairman.

Senator INOUYE. Senator Burns.

OPENING STATEMENT BY SENATOR BURNS

Senator BURNS. Thank you, Mr. Chairman, I have an opening statement, if you would be so kind to indulge me.

This hearing is important and timely. I congratulate you and our very distinguished Committee Chairman—Senator Hollings—for moving forward to debate the effects of the MFJ line-of-business restrictions—in particular, the manufacturing prohibition.

In addition to a full discussion and debate on the manufacturing restriction, it is my view that the Subcommittee should also address and examine the MFJ information services restriction and, at least some aspects of, the interexchange prohibition.

I believe that it would be a mistake to examine any one of the line-of-business restrictions in isolation without analyzing the interrelationship and intertwined nature of all the line-of-business restrictions: manufacturing, information services and interexchange services.

First, with regard to the manufacturing restriction, we must examine whether the manufacturing restriction is hurting small, medium and large American firms by blocking them from collaborating with the Bell Regional Holding Companies.

Senator Hollings' bill—S. 1981—is a good starting point for debate. I have concerns, however, that S. 1981 does not go far enough because it would require a full separation of research, design and development activities from the knowledge and expertise base that resides in the Regional Holding Companies. At first blush, this appears to be inconsistent with the way truly effective research, design and development is done here in the U.S. and—too often with greater success—by foreign-based firms.

I want to be sure that government policy does not impede American telecommunications R&D investment.

Second, with regard to the information services restriction, we should examine whether the Regional Holding Companies would have an even greater incentive to undertake research and development if the information services restriction is modified because they would be more likely to benefit from the fruits of those efforts.

Third, Mr. Chairman, rural areas must not be left out of the developing "information age". In a state like Montana there will, for the foreseeable future, likely be fewer suppliers of information services than there are in more heavily populated areas. It is, therefore, essential that telephone companies in rural areas face a regulatory environment at both the federal and state level that encourages—or at least does not discourage—provision of information services. Thus, we should undertake an examination of whether some limited modification of the MFJ interexchange restriction may be necessary.

Finally, related to each of these three substantive restrictions, we should also analyze the jurisdictional question—that is, the question of whether Congress should reassert primary control over national communications policymaking.

I look forward to the testimony from our distinguished witnesses.

Thank you again, Mr. Chairman.

Mr. Clendenin, thanks for coming today. If Chairman Hollings' bill, in addition to permitting you to engage in manufacturing activities, also permitted you to provide information services, what impact would that have on your consumers?

Have you ever measured that? I know that you just touched on the information explosion, and I guess that is what caused the question.

Mr. CLENDENIN. Well, I cannot give you a quantified answer, Senator, but I can tell you that there are a lot of families of information services that we think the American public has an interest in or would have an interest in and were we permitted to do those kinds of things, if a change occurred in the MFJ and we were permitted to do those kinds of things, we would begin the process of introducing them to our customers.

I think the recent court of appeals' decision is a hopeful sign, but it is certainly not a fait accompli at this point in time. So we are watching that and encouraged by it, but we still, at bottom, would say that ultimately telecommunications policy ought to be set by the Congress, not by the court.

Senator BURNS. If information services were included in this legislation—I imagine it will have to be dealt with at a later date—would you take a different look on the monies that you budget for R&D?

Mr. CLENDENIN. The information services that probably would come into the fold first are essentially services that have been developed by others and probably would not require additional R&D, but there is no permissibility for us to provide those services to the telephone-using public today and were we allowed to do so, we would implement some of those rather quickly.

I would think that there are any number of developers of software who have been working on ideas that fit into this area, but they need a critical mass. If you go back to the kind of services that were brought about in the early videatext trials, that the AT&T company partnered with the Knight-Ridder newspapers down in Miami, you can conceive of a whole family of kinds of information services. But unless you build critical mass, there is nobody who is going to find it economic to deliver those services.

We are experiencing the same kind of thing in our Transtext Universal Gateway in Atlanta, which is participated in by a lot of information database providers, but it is a question of the economics of the critical mass as to whether or not it is going to work.

If we are permitted to be part of that, then we would just add to the critical mass, and I think maybe some of these services will then begin to spread pretty quickly in this country.

A lot of the R&D for those kinds of services has long since been done by a lot of different information providers and database providers.

Senator BURNS. Again, thank you for coming.

Mr Chairman, that is all the questions I have. Thank you.

Senator INOUYE. Thank you. Mr. Clendenin, those who oppose your position have suggested that the telecommunications equipment industry in the United States has actually flourished since divestiture and hundreds of new companies have entered the market.

And they suggest that if this bill is passed, it would permit the RBOCs to drive these new companies out of business through cross-subsidizing and self-dealing.

Mr. CLENDENIN. Senator, I have said it before and I would reiterate, I do not think that the regulatory process and the current accounting situations that prevail within that process would permit cross-subsidization. It would become apparent immediately, and it simply would not be permitted.

So I just do not accept that that is a realistic threat.

Senator INOUYE. On the matter of the $2.6 billion deficit that you cited, those who oppose your position have suggested that this is primarily the result of purchases of low-end products by consumers, which are primarily produced by Singapore and Taiwan. And they say that, for the more valuable products, the United States has a trade surplus.

Mr. CLENDENIN. I think I acknowledged that in my earlier answer, Senator, that the low-end markets are essentially abdicated to foreign manufacturers, as they have been in the consumer electronics world, and that the high end market, the American switch market, has essentially remained in this country.

That is why I quoted the figures about how much of that switch market we are spending our money on. I said in excess of 79 percent in 1988. So I agree with you.

My concern though is that I know full well from the announced intentions of manufacturers elsewhere in the world that they have targeted the U.S. market; they fully intend to attack the American switch market.

If we are on the sidelines, I do not think we can be effective in the process. If we are permitted to be part of the process, I think the American manufacturers of switches would actually find it to their advantage and not to their dismay.

Senator INOUYE. You would not get involved in the production of low-end products then?

Mr. CLENDENIN. We have no expertise in manufacturing. I would think that it would be a very bad business judgment to try to go into competition with experienced manufacturers in the low end of the market where the margins are very, very slim.

The reason those companies have all moved overseas, even American companies that manufacture in the low end of the market, like AT&T making its instruments overseas, is because it is a very difficult market. And we have no expertise in fabricating in that market, so it would be a very questionable business decision, and I think that my shareowners would not be well served by my assuming that I could make a success out of that where everybody else has not.

Senator INOUYE. So your contention is, with the present system of accounting and the obvious interest of other competitors, cross-subsidizing and self-dealing would be out of the question?

Mr. CLENDENIN. I believe it would be identifiable, very clearly, and that it would not be a problem to deal with.

Senator INOUYE. Mr. Clendenin, you have been very helpful to us.

The CHAIRMAN. Mr. Chairman, would you yield?

There is only one question. I think you have done well, Mr. Clendenin. There is only one matter implicit in the questions of my colleagues, that perhaps was not answered and that was the idea that if we allow the BOCs to engage in manufacturing then the monies that would go into manufacturing would be taken away and the rate payers could suffer.

I would ask, Mr. Chairman, respectfully that this newspaper article be included in the record by reference. It is dated December 10, 1989 in the Business Section of "The New York Times," entitled, "The Baby Bells Scramble for Europe." As this article shows, you are already doing it.

And we cannot even hold a hearing on controlling the BOCs' investments overseas because we cannot—the judge controls it and the foreigners do. And we are sitting up here doing nothing, as Senator Breaux said, other than palavering about it.

NYNEX owns half of Gibraltar Telephone, telephone network management services in Britain and France, financial services software in Britain, telephone service improvements in Poland and Hungary.

Southwest Bell Corporation: British cable, freedom phone sales, proposed business transaction links.

Bell Atlantic owns Sorbus Computer Services, computer leasing and sales in Munich, telecommunications consulting, West Germany, Italian phone system software.

Ameritech: British voice messaging.

Pacific Telesis: West German cellular system, cable television in Britain; wireless telephone ventures.

US West: Cellular system in Hungary, fiber-optic cable across the Soviet Union, cable television in Britain and France.

BellSouth: a stake in a French cellular company, wireless telephone bid in Britain.

And then I see, since you have answered, that you BellSouth are in West Germany in the software market and I happen to know Pacific Telesis is out in the Pacific.

So it is a given. I mean, some of the questions would say, well, wait a minute, we are starting a new policy. Well, it's not a new policy. We are simply repeating that old political slogan, "Come Home America". The policy is there. But we are not in control of it. The BOCs are going overseas, and if they are spending too much money then let us have a hearing on that, but we are not in a position to stop it because the judge has got control of it, and we do not have anything to do with it.

Thank you, Mr. Clendenin.

Senator INOUYE. Thank you. May I now call the Vice Chairman of——

Senator GORTON. Excuse me, while Mr. Clendenin is here, can I ask one more question?

Senator INOUYE. Certainly.

Senator GORTON. Mr. Clendenin, going back to 1987 when the Bell companies petitioned the court for the right, among other things, to go into manufacturing, Judge Greene found that you did not meet the competition test, that circumstances had not changed so as to warrant the removal of the manufacturing restrictions.

Is it your position here today that the court was wrong in 1987 or is it your position that the market has changed so dramatically between 1987 and 1990 that even though the court may have been right then, you should be allowed into manufacturing today because those circumstances no longer exist?

Mr. CLENDENIN. I think the latter is the one I would place the emphasis on, Senator. I do not want to go back and say that I agree with his decision in 1987, because I did not. But the real essence of it is the dramatic speed of change that is taking place, within the whole industry and as the information age dawns, will be even more accelerated in the future.

And clearly, the kind of circumstances that I have tried to describe or allude to here are changing right while we are sitting here, and I think that the nature of the change in the years between 1987 and 1990 has been extremely dramatic, very, very dramatic.

Senator GORTON. Thank you, Mr. Chairman. Thank you, Mr. Clendenin.

Senator INOUYE. Thank you very much.

Now may I call upon the Vice Chairman of AT&T, Mr. Randall L. Tobias. He is accompanied by Mr. Ross of Bell Labs and Mr. Zeglis, the Senior Vice President and General Counsel.

STATEMENT OF RANDALL L. TOBIAS, VICE CHAIRMAN, AT&T; ACCOMPANIED BY JOHN D. ZEGLIS, SENIOR VICE PRESIDENT AND GENERAL COUNSEL; AND IAN M. ROSS, PRESIDENT, BELL LABORATORIES

Mr. TOBIAS. That is correct, Mr. Chairman. I want to thank you very much for the opportunity to be here today.

As you know, the Chairman of the Board of AT&T, Bob Allen was asked to appear today. Unfortunately, he had a conflict and had to be in London today dealing with a very urgent matter that has to do with the expansion of our sales to some European customers.

As you have observed here, the ability of U.S. firms to compete and to compete successfully in global markets is really much of what this is all about, so I very much appreciate your understanding, and your invitation to me to testify here today on this pending legislation.

As we all know, competition was not always the norm in our industry. For nearly a century it was an industry characterized by monopoly markets. In 1949 the government brought an antitrust suit against the Bell system. That suit ended in 1956 with a consent decree that confined the Bell system to what was then thought to be an effective natural monopoly, that is, operating the Nation's local and long distance telephone network and manufacturing equipment for that network. And the Bell System agreed to stay out of all unrelated competitive businesses.

By 1974 two more pieces of the Bell System had become competitive: long distance and manufacturing. The government again brought a lawsuit to separate these competitive businesses from what were still considered natural monopolies, the local exchanges.

There were many allegations of abuse of those monopolies, which are essential facilities to both long distance and equipment manufacturing businesses. These allegations came in both the government suit and some 70 separately filed private antitrust suits.

The government case ended with the 1984 divestiture of the local exchange monopolies and corresponding restrictions on the local companies re-entering the long distance and the manufacturing businesses. The purpose of all of that was to end the controversy and to establish an industry structure that would be pro-competitive. Just as in 1956, the monopoly parts of the business were separated and excluded from the competitive businesses.

So how has the industry structure worked since that time? Well, six years later we look back and find that it is working very well, just like the Nation's competitive policies are supposed to work. Without the incessant controversies, without the fear that the local exchange companies are going to discriminate in favor of their own affiliates, we now see many more firms competing in both manufacturing and in long distance.

We see increases in both the level and the rate of R&D investment by U.S. firms. We see more features and service choices for business and residential customers, and we see significantly lower prices for virtually all equipment and all long distance services.

By any objective measure, this has been a considerable success. The data presented in recent studies like those conducted by the Consumer Federation of America and the International Communications Association and by the three major telecommunications manufacturing associations, also confirm the leadership of U.S. telecommunications networks and quantify the explosion of new products and services that has occurred in this country since 1984.

Our recent NTIA filing, which is attached to my formal testimony, shows that by any credible standard, the United States has the richest array of facilities, employing the most advanced technologies, providing the widest array of services to the broadest cross section of society and at the most reasonable cost of any nation in the world.

America is not number two or number three or number four. America is number one. Our Nation has the best technology, the best equipment and the best networks in the world, and we do not need academics to tell us what has driven this performance in this country.

Every day we now meet our competition in the marketplace and they meet us. Whereas, years ago, we had a virtual monopoly in both long distance and manufacturing, today we compete for each and every sale, against scores of competitors in each and every market.

And we know that the spur of competition has made us move faster and further in meeting customer needs in the marketplace. Competition has pushed us forward as a nation. It has pushed us to the front of the global race, producing benefits for American consumers and businesses.

And I think the success of this American experience has not been lost on other nations. Our competitive model in this industry was at first rejected by the largely state-run communications monopolies of the world. Since 1984 and increasingly, however, it has been taken seriously in country after country.

Competition, privatization, deregulation and, yes, even divestiture, these are terms in discussions that now dominate the new language that is increasingly being spoken at international telecommunications conferences around the world.

But we are the nation that has gone furthest along this path to the future. As an example, just a few weeks ago I was in Japan doing some business, generating some sales I am happy to say. When your counterparts in the telecommunications committee at the Diet learned that I was there, my views were sought on Japanese proposals to divest the NTT local exchange monopoly from its newly competitive long distance and cellular businesses. NTT does not manufacture today and would not do so in the future under any of the plans being considered, even in Japan.

My point is that our competitive policies here are on the right course, and we are ahead in the race and the world is playing catch-up.

These hearings act as a checkpoint in this global race. They also signify a crossroads. Do we go forward with our competitive model or do we retreat to the sole supply model of the pre-1984 days, where the local exchange monopolies had an affiliated supplier and all of the controversy and problems associated with that relationship.

Unfortunately, for the reasons set forth in my statement, including a generation of experience, this is an either/or situation. We cannot have it both ways. Monopoly and competition simply do not mix well in this industry. Regulation did not and it cannot change this law of nature.

There are a number of things the government can do and in many cases is doing to enhance the ability of U.S. firms to continue to lead the world in telecommunications products, services and technologies. Dr. Ross will speak to some of those.

In our view, reintegrating the Bell monopolies with competitive businesses that depend on those monopolies is not one of them. This would be a reversal of direction and would not produce benefits for our country.

Mr. Chairman, as you noted, I am accompanied today by Mr. Ian Ross, who is the President of AT&T's Bell Laboratories, and Mr. John Zeglis, who is the Senior Vice President of AT&T, who has responsibility for government affairs and is the corporation's general counsel.

Both of these gentlemen, however, are also members of the corporation's senior executive committee and it is in their multiple roles that they accompany me today, and with your permission, both have very short opening statements.

[The statement follows:]

STATEMENT OF RANDALL L. TOBIAS, VICE CHAIRMAN, AMERICAN TELEPHONE AND TELEGRAPH CO.

Mr. Chairman and members of the Subcommittee: My name is Randall L. Tobias. I am Vice Chairman of the Board of American Telephone and Telegraph Company ("AT&T"). We greatly appreciate the Subcommittee's invitation to appear today to discuss S. 1981. This bill would eliminate the AT&T Antitrust Decree's ("Decree") prohibition against the manufacture of telecommunications equipment by the divested Bell Operating Companies ("BOCs") and would, instead, adopt "safeguards" that are designed to prevent abuses of the BOCs' bottleneck monopolies.

The basic issue before the Committee is how best to assure that the nation's telecommunications industry continues to be characterized by technological innovation, economic growth, and ever-declining costs for consumers. AT&T broadly addressed this question -- and the role of the Decree -- in the attached Comments we recently filed with NTIA.

My testimony today will show that S. 1981 -- and any bill eliminating the Decree's manufacturing prohibition -- would have precisely the opposite effect. It would not only recreate the controversies and stagnation that the Decree ended, but would create the worst of all worlds. It would be a death blow to American competitiveness in areas where we are the undisputed world leader. The proposed safeguards are no answer.

My testimony is divided into three parts. First, I will explain the background and reasons for the Decree and its line of business restrictions. Second, I will describe the enormous consumer and other benefits that the Decree has fostered in the telecommunications industry. Finally, I will address the severe adverse effects that lifting the equipment manufacturing restriction would have on competition, consumers, and American manufacturing.

I. Background of the Line of Business Restrictions.

The Decree's line of business restrictions and AT&T's January 1, 1984 divestiture of the BOCs are "opposite sides" of a single coin. Each stems from the fact the BOCs' local exchange facilities are natural monopolies or "bottlenecks," and that it creates profound competitive problems -- and intractable regulatory disputes -- if a single firm both owns these monopoly facilities and participates in closely related competitive businesses.

Prior to 1984, the Bell System was in precisely that position. Through the BOCs, the Bell System owned the local telephone exchanges, which everyone recognized were natural monopolies that competitors could not duplicate. Through AT&T and Western Electric, the Bell System also participated in competitive businesses which depended on access to the BOCs' local "bottlenecks" or to information controlled by them. The

Bell System provided interexchange (long distance) telephone services, which required the use of the BOCs' local exchange facilities to originate and terminate each call. And it engaged in the manufacture of telecommunications equipment, which is a market in which no firm can succeed unless they have information about the evolving technical characteristics of the BOCs' local exchanges and unless the BOCs will purchase the firm's equipment when it is in fact the best and the cheapest.

The Bell System's integration of the exchange monopolies and competitive long distance and manufacturing businesses produced great public benefits. Because a single entity essentially engineered, built, and managed the nation's telecommunications system, it created great opportunities for efficiency, and the Bell System built a single national telephone network that was the envy of the world.

But the combination of BOC exchange bottlenecks and competitive businesses also led to incessant controversy. More than seventy major private antitrust cases were brought against the Bell System in the 1970s alone, each of which claimed that the local monopolies had been "leveraged" to foreclose competitors in long distance, equipment manufacturing, or other markets by (1) discriminating in the pricing of local bottleneck facilities to favor Bell companies, (2) discriminating against competitors in the complex process of providing the local access facilities (or information controlled by them) upon which the competitors absolutely depend), or (3) purchasing a manufacturing affiliate's products at inflated prices, even when better or cheaper products had been (or could be) manufactured by others.

For example, equipment manufacturers charged that the BOCs had assured that it would always buy Western Electric products by (1) denying competitors timely access to the network engineering information required to design the products that the BOCs need, (2) cross-subsidizing equipment manufacturing by misallocating monopoly-funded design costs to monopoly telephone operations and thereby allowing sales of Western Electric products at misleadingly low prices, and (3) when all else failed, discriminating in procurement by purchasing its affiliates' products at inflated prices, despite the presence of better or cheaper alternatives (with the assurance that the inflated prices would be passed onto captive ratepayers). Indeed, the claim was that the each BOC would have irresistible incentives to engage in this conduct so long as it both owned exchange monopolies and was affiliated with a manufacturer.

In 1974, the United States filed an antitrust action that sought to prevent any possibility of abuses of the local monopolies in the most direct way possible: by requiring AT&T to divest the local exchange monopolies and, in turn, prohibiting the divested BOCs from reentering those competitive businesses so long as the local telephone franchises retained their natural monopoly characteristics.

During this period, the FCC, the Congress, AT&T, and the Justice Department made massive efforts to develop "safeguards" that would prevent these abuses while allowing the integration of monopoly and competitive businesses to continue.

For example, the FCC instituted proceedings to assure that BOC procurement practices were fair (Docket 19129 [Phase II] and Docket 80-93), to assure that costs were properly allocated between competitive and monopoly telecommunications services (e.g., Docket 18128), to assure that monopoly revenues did not cross-subsidize equipment manufacturing (e.g., Docket 80-743), to assure that technical information was disclosed in a timely fashion, to assure that access to the local exchanges was non-discriminatory and the rates fair (e.g., Docket 78-72), to assure that the Bell System's competitive pricing responses were not predatory (e.g., Hi-Lo tariffs, DDS, MPL, Telpak), and to assure that detariffed telephone equipment competition would be fair (Second Computer Inquiry). These issues were so complex that several of these proceedings spanned decades, sometimes without any final resolution.

However, state and federal regulation could not prevent incessant antitrust controversies.

During the 1970s and early 1980s, Congress entered this quagmire and explored various possible legislative solutions that were designed to prevent abuses of the local bottleneck. Each relied on a version of "structural separation," but would allow common ownership of monopoly and competitive businesses. See, e.g., H.R. 5158, 97th Cong. 1st Sess. (1981); S. 898, 97th Cong., 1st Sess. (1981). Similarly, AT&T and the Justice Department tried to negotiate a detailed "regulatory" decree that would have established separate subsidiaries within the Bell System and other devices to prevent abuses.

These proposals would have created the worst of all worlds. They would have nullified the efficiencies of integration. But they would have continued its costs: the incessant antitrust litigation. The reality is that the BOC exchanges are so complex -- and the procurement and other decisions so subjective -- that no set of regulatory requirements could adequately assuage competitors' concerns and prevent disputes over discriminatory pricing, provisioning, and procurement by BOCs.

In this regard, the problem was not just that BOCs might commit antitrust violations. The Bell System's vertical integration caused stagnation and inhibited innovation, irrespective of whether there were such abuses. The incessant antitrust and regulatory controversies dragged down the Bell companies and the whole industry. More fundamentally, the integration of monopoly and competitive businesses itself operated as a powerful entry barrier. The ability and incentive to misuse the monopoly to prevent competition was so potent -- and so immune to regulatory control -- that unaffiliated firms believed that their products and services could not succeed on the merits and did not make the R&D and other investments required to compete in access-dependent markets.

By 1982, it became apparent that there was only one way to fully implement the national competitive telecommunications policy: separation of the BOCs' monopoly exchanges from competitive activities, with assurances that the monopolies would not re-integrate into related competitive businesses. This separation had been at the heart of each major legislative and regulatory proposal in the late 1970s, and the AT&T Decree made the separation wholly effective through divestiture and line of business restrictions on the BOCs. The Decree was thus a necessary and logical step -- and, indeed, the watershed event -- in implementing the national competitive policy.

This separation created a level playing field upon which non-Bell firms could compete -- with the assurance that all firms would obtain equal access to the BOCs' exchanges (and information about them). It meant that capital would flow to the firms with the best ideas, and that if products or services failed, the losses would be borne by private investors and entrepreneurs, not monopoly ratepayers.

At the same time, the AT&T Decree was carefully fashioned to assure that the break-up of the Bell System did not destroy the most vital feature of the nation's telecommunications system -- its unified character. The single Bell System had assured that the national network was engineered as a single national network and that no equipment would be added to the network unless it both satisfied national and international interconnection standards and would interoperate optimally with other network equipment. The Decree sought to prevent the threatened balkanization of the network by (1) establishing Bell Communications Research, Inc. (Bellcore) (wholly-owned by the 7 BOCs) to establish generic engineering specifications for products and to evaluate different manufacturers products, and (2) assuring that BOCs' individual procurement decisions were based solely on quality (and compliance with these specifications) by excluding the BOCs' from developing their own proprietary products.

II. Competition in the Post-Divestiture Telecommunications Industry.

The Decree has led to economic growth that is almost unprecedental in American economic history. For example, when the Decree was announced in 1982, AT&T had the only national long distance network. Although it was the envy of the world, it was principally an analog network. The networks of MCI, Sprint, and the other interexchange carriers were then collectively only five percent of the size of the AT&T network; none of their networks were ubiquitous; and they offered rates of blockage and grades of service that were unacceptable to sophisticated users.

In the ensuing eight years, three other national networks have been built, several regional networks have been constructed, and all the networks are mostly digital. Hundreds of new long distance telephone companies have entered the competitive interexchange market in reliance upon the equal access guarantees provided in the Decree and the fact that the owners of the essential local exchange facilities cannot compete in this market. Today there are over 400 interexchange carriers in competition with AT&T. This intense competition has provided extraordinary benefits to consumers. Interexchange rates have declined over 40 percent since divestiture in actual terms, and even more in real terms.

The consumer and other benefits have been equally dramatic in telecommunications equipment manufacturing. Since the Decree was announced, hundreds of new firms have entered the American market, made massive research and development investments, and began selling products to the BOCs. Since divestiture, domestic telecommunications equipment manufacturers have grown at a rate more than four times that of other manufacturers -- at a compounded annual rate of 7.1 percent as compared to 1.6 percent for all other manufacturers. During that time, prices have declined sharply for all product lines. Yet despite falling prices, the value of U.S. factory sales of telecommunications equipment has increased dramatically -- from $36.0 billion in 1980 to $74.2 billion in 1988.

The record in technological innovation has also been unparalleled. Developments in transmission technology have moved so quickly that the capacity of each strand of optical fiber has doubled each year since divestiture. Developments in microelectronics and software technology have also driven down the costs and increased the capabilities of all equipment.

At the same time, these policies have allowed an increasingly positive balance of trade surplus in the telecommunications network equipment that BOCs buy -- over $600 million in 1989 -- which has occurred despite the fact that many major foreign markets are effectively closed to American manufacturers and the U.S. market is wide open to foreign firms. For AT&T's part, all the equipment it sells to LECs for use in their networks is manufactured in the United States.

And absent some change in government policy, continuous technological achievements and benefits to the nation are assured by the dramatic increases in telecommunications R&D that competition has spurred.

III. The Decree's Line of Business Restrictions Should Not Be Changed.

The challenge for government policy is to continue the extraordinary growth and consumer benefits that has occurred in the past eight years. To eliminate the manufacturing restriction -- and again rely on "safeguards" -- would have precisely the opposite effect. It would not only recreate the controversy and stagnation that the Decree ended, but would be a death blow to American manufacturing.

The overriding fact is that the local exchange facilities of the BOCs indisputably continue to own bottleneck monopolies. It is for this reason that no one disputes that the interexchange services restriction is essential to the maintenance of competition and that it serves the public interest. Yet the continuation of the bottleneck equally requires continuation of the manufacturing restriction. Indeed, when the Court of Appeals recently upheld the findings that the interexchange and manufacturing restrictions should be retained, it found the need for retention of the manufacturing restriction to be compelling. See United States v. Western Electric, No. 87-5388, slip op. 37-44 (April 3, 1990).

To eliminate the manufacturing restriction would choke off the entry and investment that has produced the enormous consumer benefits. Firms will make the investments necessary to bring new telecommunications products to the market only if two conditions are met: (1) they are assured timely access to information about the BOCs' needs and the ever-changing technological characteristics of the BOCs' network which is critical to the design and development of new products, and (2) they are assured that the product each manufacturer develops will succeed, or fail, on the merits. As history demonstrates, those conditions cannot exist if the BOCs are permitted to develop and manufacture their own products. The incentives to discriminate are so strong -- and so immune to effective regulation -- that unaffiliated firms will not make the R&D investment.

Further, eliminating the restriction would do more than deny the public the benefits of increased competition and entry. Allowing monopolies to control the development of technology by manufacturing would also threaten the balkanization of the national telecommunications "infrastructure." If BOCs could manufacture, each would have incentives to develop and procure proprietary products, irrespective of whether they operate optimally with equipment in other carriers' networks.

In this regard, "safeguards" are no answer. They would not prevent the controversies and stagnation. To the contrary, effective safeguards could have only one consequence: precluding any BOC from achieving efficiencies through vertical integration even in manufacturing equipment for its regional network. For any safeguards that prevents the possibility of abuses would equally prevent any genuine efficiencies. It was largely because of this fact that the Bell System and the Courts concluded that safeguards were the worst of all worlds. Further, because no BOC controls more than one-seventh of the nation's access lines, no BOC can create the efficiencies that the former Bell System enjoyed.

Finally, lifting the prohibition against equipment manufacturing could also be a death blow to American competitiveness. Today, American firms with no foreign affiliation are preeminent in selling the telecommunications equipment (switching, transmission, and media) purchased by BOCs and the nation's local exchange carriers. Thus, in the case of AT&T, all the equipment it sells to the BOCs for use in their networks is manufactured in the United States. The revenues that these American firms earn in this country, in turn, support the efforts of American firms to sell telecommunications network equipment in those foreign markets that are not closed to American firms.

Whereas the balance of trade for network equipment is positive (see supra), the Decree has likely meant that the balance of payments is somewhat less favorable now than it was prior to divestiture. Before divestiture, the BOCs met over 95% of their needs from their then-affiliate, Western Electric. Because the divested BOCs have had no affiliate upon which to rely, they have wanted to establish multiple sources of supply, and there have been many products (e.g., central office switches) for which the only alternative to AT&T is foreign firms. That has meant that some sales that would otherwise have gone to American firms now go overseas, and these purchases of foreign equipment have not yet been offset by increased sales (domestic or export) by the American firms who have recently entered the equipment manufacturing market in reliance on the industry structure created by the Decree.

However, eliminating the equipment manufacturing prohibition would almost certainly mean that our nation's telecommunications trade balance would worsen, not get better. It would create the worst of all possible worlds for American manufacturers. The reality is that the BOCs could not enter the market for the manufacture of central office switches because the purchases of one BOC could not come close to supporting the R&D required for such a product. Accordingly, the BOCs could only participate in this market by forming joint ventures with such foreign manufacturers as Siemens or Ericsson and then satisfying all, or nearly all, their needs from these foreign affiliates.

The consequences for American competitiveness, and our balance of trade, would be devastating. It would simultaneously (1) foreclose American markets to American firms, (2) deny American firms the revenue needed to sustain the research and development needed to sell equipment to European, Asian, Middle Eastern, and other foreign markets, and (3) give foreign firms captive markets and guaranteed sales in this country. It is no answer that some of these foreign firms would perform assembly of equipment in this country. The high-technology work and jobs -- the R&D -- would be exported to other countries. This country's technological leadership would end.

The consequences would be especially severe because Japanese and European manufacturers have, to date, successfully excluded AT&T and other American firms from Japan, Germany, France, and other European markets. Changing of the injunction would have the extraordinary consequence that foreign firms would, through alliances with the BOCs, exclude American firms from the American market as well.

In short, the net result of BOC reentry into manufacturing would be simple: destroying American competitiveness in one of its remaining areas of preeminence in the world: the design and manufacture of network switching equipment.

I thank the Committee for its invitation and would be pleased to answer any questions.

Mr. Ross. Thank you, Mr. Chairman, I have submitted my formal testimony for the record. What I will do now is just briefly summarize the three main points that are in that testimony.

The first point is that the U.S.A. today leads the world in telecommunications R&D and in telecommunications technical innovation. As one example, some 76 percent of telephone lines today are served by electronic software control machines, and that is some 50 percent greater than in the U.K. or in Japan.

The important point here is that it is these machines that provide the flexibility to permit a very wide range of services to customers. We have extensive deployment in the Nation of the most modern fiber optic transmission systems within our cities across the Nation and now under the oceans to Europe and to Asia.

Similar technology is being brought into the local exchange plant which connects the customers to the network. We have a rich supply of terminal equipment available to our end-users, and we have the most extensive deployment in the world of data networks for data customers.

My second point is that the health of the U.S. telecommunications equipment industry is indeed enhanced by the present industry structure. Since divestiture, literally scores of firms have either entered the telecommunications equipment manufacturing market or have expanded their roles in that market.

We have increased the amount of telecommunications R&D in the Nation. Before divestiture, the Bell System in total spent about $1.5 billion a year on R&D. Today, AT&T alone spends $2.6 billion a year on R&D.

We also have a very good dialogue ongoing between vendors ourselves and customers in the telephone companies, and that dialogue extends from an initial discussion of customer needs, discussions of what the technology can support, to the specifications of equipment, and all the way to having telephone company representatives in our plants to oversee our quality.

I would point out that this free flow of information would not be possible if our customers were also our competitors in the supply of their manufactured equipment.

So I see that the decree is working as designed, and importantly, it is working because equipment manufacturers receive timely access to information and they expect their products to be judged on the merits of those products.

Now were the BOCs to be permitted to enter the equipment manufacturing market, it would jeopardize, and I believe it would reverse, these good trends; after all, they control 70 to 80 percent of the exchange network technology, and if this market were not open to independent equipment manufacturers, those manufacturers would not be able, they would not be willing to making the investments, including the R&D investment, needed to bring such products to market.

This would weaken the U.S. industry. By the way, to the extent that the BOCs would choose to venture with overseas partners, that would strengthen foreign competition.

Now, my third point is that while allowing the companies to enter the equipment manufacturing business would hurt U.S. industry, there are other actions that the government can take to improve the U.S. industrial competitiveness.

I happen to chair the National Advisory Committee on Semiconductors, which studied the health of the U.S. semiconductor industry and made a report to Congress and the administration last November.

In that report we identified a decline in the semiconductor industry and a related decline in the electronics industry. For example, as has already been mentioned, consumer electronics manufacture has almost essentially all left this country and is now down in Asia, and that includes the consumer electronics equivalent in the telecommunications terminal business.

If these declines in the semiconductor industry and the electronics industry are allowed to continue they could eventually undermine the United States computer industry and the United States telecommunications equipment industries.

Thus, there is an urgent need to improve our industrial competitiveness as a whole by improving the environment for U.S. industry. This involves lowering capital costs, improving our education, protecting our intellectual property and opening up foreign markets.

Such measures will help ensure the long-term health of our telecommunications industry and they need our urgent attention.

Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF IAN M. ROSS

PRESIDENT, AT&T BELL LABORATORIES

Mr. Chairman and Members of the Subcommittee: My name is Ian M. Ross, and I am President of AT&T Bell Laboratories. I am grateful for the opportunity to appear before the Subcommittee today to discuss the proposal to amend the Modification of Final Judgment (sometimes referred to as the "Decree") by relaxing or removing the Decree's restriction on the entry of the divested Bell Operating Companies ("BOCs") and their Regional Holding Companies ("RHCs") into the telecommunications equipment manufacturing business.

My testimony today will address three related subjects. First, it will show that, with respect to telecommunications research and development ("R&D") and technological innovation, the United States today leads the rest of the world. There is thus no need, as some have contended, to permit the BOCs to enter this business on the basis that there is some deficiency in the competitiveness of U.S. telecommunications technology. Second, my testimony will explain how, in fact, the good health of the U.S. telecommunications equipment industry is enhanced by the very industry structure created and fostered by the Decree and its line-of-business restrictions. Finally, although altering today's industry structure by allowing BOC entry into telecommunications manufacturing would only impair, not advance, the competitiveness of U.S. telecommunications technology, my testimony will show that there are actions that government can take to stimulate growth and development in other U.S. technology industries. These actions would help ensure the continued success of U.S. telecommunications manufacturing and R&D efforts.

I.

We can all take great pride in the fact that the United States not only has the world's finest telephone system and service today, but that the U.S. telecommunications industry as a whole leads the world in economic growth and technological innovation. No nation equals the United States in the availability, quality, reliability and affordability of telecommunications services. The United States also has the world's most technologically advanced telephone network. For example, in 1988, over 76% of U.S. telephone lines were served by electronic switching systems -- over 50% more than the United Kingdom, and more than double that of Japan.* Both analog and digital electronic switches, through their stored program control capability, can be readily and continually updated to provide a complete range of new services, and can be maintained more economically than older technologies.

The economic and technological vigor of the U.S. telecommunications system has been fueled by (and has fueled) dramatic growth and innovation in the design, development and production of new telecommunications equipment and technologies. Since the Decree was announced in 1982, scores of new U.S. firms have entered these markets and made substantial investments in R&D. As intense competition and rapid technological development spur greater efficiencies in this sector, prices have declined in all telecommunications product lines, and despite the falling prices, Commerce Department data show that the overall value of U.S. factory sales of telecommunications equipment has more than doubled, from $36 billion in 1980 to $74.2 billion in 1988.

---

* Source: The World's Telephones, AT&T, 1989.

Some who argue for allowing BOC entry into telecommunications manufacturing assert that the United States has assumed a "second class" status in telecommunications trade. This is unfounded. Indeed, the burgeoning domestic telecommunications equipment business has produced a positive balance of trade surplus in recent years -- over $600 million in 1989 alone -- in telecommunications network equipment. This network equipment includes the most sophisticated and complex switching and transmission systems -- and represents the "high end" technology of the type purchased by carriers for use in the national telecommunications infrastructure. By contrast, the $2.6 billion telecommunications trade deficit reported by the Commerce Department for 1988 is attributable overwhelmingly to the mass market consumer products (such as corded telephones and facsimile machines) that are also included in the telecommunications equipment category. Although it is true that, in recent years, the manufacturing of these terminal equipment products -- like virtually all consumer electronics goods -- has moved offshore, that phenomenon is part of a much broader problem which, as discussed later in my testimony, has nothing to do with the structure of the U.S. telecommunications equipment industry and would not be alleviated by permitting BOC entry into telecommunications manufacturing. In all events, American consumers are not being denied any benefits in this regard, for we enjoy the broadest array of low-priced feature-rich terminal equipment in the world.

Most importantly, the future holds great promise for economic and technological growth in the United States telecommunications industry -- so long as the conditions that have helped spur our recent successes are permitted to continue. This is so for the simple reason that the firms competing in the telecommunications equipment business in recent years have stimulated -- and continue to stimulate -- an enormous and increasing investment in domestic R&D, which in turn foreshadows a continued flowering of the innovative and beneficial new technologies upon which U.S. competitiveness depends.

In this regard, I am especially proud of my own company. In AT&T Bell Laboratories, the United States enjoys an unparalleled resource: the world's leading telecommunications research and development capability. And

AT&T recently has expanded this capability. For example, in 1981 (the year before the Decree was announced), the Bell System _as a whole_ spent about $1.5 billion on R&D. Although the post-divestiture AT&T is only 30% the size of the former Bell System, AT&T itself spent over 75% _more_ on R&D in 1989 ($2.65 billion) than did the entire Bell System in 1981, and the other firms that comprised the former Bell System (Bellcore and the seven RHCs) spent approximately an additional $1 billion on R&D in 1989. AT&T Bell Laboratories R&D activities today employ more than 30,000 people in the United States. There have been equally dramatic increases in R&D investment by other leading U.S. telecommunications firms: for example, the annual R&D investments of 15 of the largest U.S. telecommunications manufacturers have grown from $778 million to over $1.2 billion since divestiture. Overall, in the years since the Decree was announced, company-funded R&D investment by domestic telecommunications manufacturers has averaged 8.4% of the value of the manufacturers' shipments -- compared to only 6.6% in 1980.*

On the strength of this broad and growing investment in R&D by U.S. telecommunications firms, it is hardly surprising that the United States has consistently offered the world's markets the best in new telecommunications switching and transmission technology. R&D investment must continue to grow, however, if the United States leadership role in this regard is to be maintained.

---

* Source: _The Post-Divestiture U.S. Telecommunications Equipment Manufacturing Industry: The Benefits of Competition_, IDCMA, NATA and TIA (collaborative research study), March 1990.

New technologies and products are continually being brought to realization through the efforts of competing U.S. manufacturers. Only last week, for example, AT&T announced that it anticipates being able to offer commercially, within five years, a new generation of switching systems being developed by AT&T Bell Laboratories, based on the use of photonic technology. The so-called "optical switch" can bring to the nation's telecommunications infrastructure vastly greater capacity and efficiency by complementing and maximizing the advantages of optical transmission technologies that have recently been developed, and that themselves today permit the capacity of the extensive fiber optic facilities already in place in this country to be doubled each year. AT&T and other U.S. firms are also making great strides in the development of state-of-the-art speech synthesis and voice recognition technologies, and "artificial intelligence" capabilities.

II.

As these facts confirm, the industry structure established by the Decree is functioning exactly as it was designed to, and is bringing to the United States the full economic and technological benefits of competition. More significantly, I believe that any change in the industry structure that would allow BOC entry into the manufacturing business would jeopardize or reverse U.S. successes, and would weaken U.S. competitiveness in the world's telecommunications markets.

The BOCs collectively represent some 70% to 80% of the market for exchange network technology in this country. Moreover, each BOC exercises absolute control over the products and technologies used in its serving area by (i) determining the technical characteristics of the ever-evolving network and, therefore, what products will be able to operate compatibly with the network; and (ii) determining the specific products the BOC will purchase. Clearly, any prospective supplier of this technology will choose to participate in the market only if that firm reasonably can hope to attract some business from the BOCs. No firm, in turn, can hope to manufacture equipment for use with a BOC's network unless that firm can both obtain timely access to the technical information about the BOC's network needed to develop compatible equipment and have its products succeed or fail on their merits; that is, on the basis of price and quality.

During the antitrust litigation that led to entry of the Decree, it was claimed that the Bell System's integrated local exchange and equipment manufacturing operations deterred prospective manufacturers from competing (or disadvantaged those that tried) by (i) favoring the Bell System's manufacturing affiliate with superior access to technical information; (ii) improperly subsidizing design and development costs from local exchange revenues; and (iii) conducting biased product evaluations and procurements that favored "in-house" designs irrespective of price or quality. Whether or not these allegations were true, the perception that the Bell System operated in this manner was apparently enough to limit competitive entry and R&D investment -- as indicated by the significant growth in these measures after the Decree was announced.

The United States telecommunications and technology sectors cannot afford to return to the controversies and uncertainties that marked the predivestiture Bell System. The BOCs are by far the largest "consumers" of high end telecommunications technology, and are thus the largest source of new product funding -- which, in turn, provides the revenues that fund essential R&D investment by domestic manufacturers. Indeed, I estimate that at least 50% of the total R&D budget of AT&T Bell Laboratories derives from AT&T's sales of telecommunications network equipment -- sales made in largest part to the BOCs. Presumably, other domestic manufacturers are at least as dependent on sales to the BOCs to fund their investments in new technology.

This industry structure -- which assures that competing manufacturers efficiently can develop, produce and offer beneficial new technology -- could not be maintained if the Decree's manufacturing restriction were removed.

First, even if the BOCs were to enter the manufacturing business without venturing or affiliating with existing foreign-based firms, the impact on the economic and technological health of the U.S. telecommunications industry would be severe. As I understand it, the Justice Department has assumed -- and no BOC has disputed -- that any RHC which became a manufacturer would thereafter satisfy virtually all of its equipment needs from its own manufacturing operation. Each RHC accounts for 10% to 15% of the nation's market for telecommunications network technology, meaning that 10% to 15% of that market would be absolutely foreclosed to competition for each RHC that chose to enter this business. If all seven RHCs became manufacturers, over 70% of the U.S. market would effectively be closed to the intense and beneficial competition that has flourished since divestiture.

The effect of such a foreclosure would be devastating. It is today's investment in R&D that drives tomorrow's new technology. As explained in Section I above, AT&T Bell Laboratories and other U.S. manufacturers are today keeping the United States at the forefront of developing such new technologies as photonic switching and transmission systems. However, AT&T can continue to invest in this R&D only to the extent that AT&T reasonably believes that its products -- the fruits of its R&D -- can succeed or fail on their merits, rather than on the basis of corporate affiliations. Presumably, other competing telecommunications manufacturers likewise will continue to invest in new technology only if they, too, are assured of a fair and stable U.S. market in which to offer their products. If, in contrast, the BOCs become manufacturers, control over the level of R&D funding and the pace of technological innovation would be in the hands of monopoly exchange service providers. They, not the market, would then dictate what technologies and products "win." Even if some or all of the RHCs entered the manufacturing business, therefore, it is likely that such entry would lead to a far broader exit among the existing domestic firms that today are responsible for the innovation and investment in the U.S. telecommunications network equipment business, and that are best positioned as well to facilitate the rebuilding of the U.S. terminal equipment and other consumer electronics industries. At the least, domestic R&D investment would decline because of the risk that new products developed on the strength of that investment will "lose" to products supplied by the BOCs' affiliates.

Of course, the effect on U.S. competitiveness of foreclosing BOC equipment markets to competing manufacturers would be even worse if -- as the Justice Department also assumes -- the BOCs in fact enter the manufacturing business through joint ventures with foreign telecommunications firms. In that event, not only would today's robust funding of R&D by the scores of competing domestic manufacturers be cut short, but the "fuel" for that R&D funding -- the revenues derived from equipment sales to the BOCs -- ultimately would flow offshore, to benefit the R&D efforts of the BOCs' foreign affiliates and thus increase U.S. dependence on foreign technological development.

In short, I believe that the U.S. telecommunications equipment industry today is healthy and efficient, and is well positioned to continue the nation's leadership status in telecommunications technology. This is attributable in many significant respects to the open, stable and competitive structure of the U.S. telecommunications equipment industry. The challenge for government is to ensure that this beneficial structure remains in place, so that U.S. firms can fulfill their technological promise.

If, in contrast, this industry structure is abandoned, and the BOCs are permitted to enter the manufacturing business, current U.S. manufacturers may no longer perceive that their products can win or lose on the merits in a fair market, or may find that substantial portions of the U.S. market are foreclosed to suppliers not affiliated with the BOCs. There will then be no incentive for these domestic companies, like AT&T, to continue to invest in critical R&D. The demise of indigenous U.S. R&D, in turn, can only impair U.S. technological development -- and strengthen foreign R&D efforts if revenues from BOC equipment purchases ultimately accrue to the benefit of foreign-based suppliers -- all to the detriment of vital U.S. national interests.

III.

This is not to say that there is no action government can take to bolster legitimate U.S. telecommunications and technology interests. As explained above, the U.S. telecommunications equipment industry is healthy, and is likely to remain so if the future stability of today's fair and open market is preserved.

Other U.S. technology industries, however, are not as robust. In this regard, the National Advisory Committee on Semiconductors ("NACS"), of which I am Chairman, has identified serious problems that now affect the U.S. semiconductor and consumer electronics industries -- problems which, if not addressed, will assume even broader significance because of the essential linkages among all electronics-based industries.

It is widely recognized, for example, that the consumer electronics industry has now moved almost entirely abroad. The fact that the U.S. telecommunications trade deficit is attributable to mass market consumer goods -- while "high end" telecommunications network equipment contributes to a substantial U.S. trade surplus -- reflects this weak U.S. position in consumer electronics.

The decline in the U.S. consumer electronics industry, however, is likely to affect other U.S. technology sectors as well. Consumer electronics products now use 20% of the world's semiconductor production, and generate revenues that fund over

$1 billion of R&D -- most of it outside the United States. As sales of foreign-made consumer electronic products continue to grow, the U.S. semiconductor industry increasingly is losing ground to foreign competitors. Indeed, U.S. semiconductor companies' share of the world semiconductor market has fallen to under 40% today.

The semiconductor industry is of major strategic importance to the United States not only because it represents leading-edge technology vital to our economic strength and national defense, but because it is the foundation for all electronics-based industries -- including computers and telecommunications. Network switching systems, for example, depend heavily on underlying semiconductor technology. It follows that if the United States continues to lose ground in semiconductor technology, the U.S. leadership position in sophisticated telecommunications technology and other important industries could likewise soon be jeopardized.

Accordingly, there is a role for government to play in seeking to recreate conditions that favor growth and investment in the U.S. semiconductor and electronics industries -- indeed, in industry as a whole. In this regard, NACS recently issued its first report proposing some initial steps government can take to enhance the competitiveness of U.S. semiconductor firms. These steps would be directed, for example, to (i) increasing incentives for investment in R&D by reducing the federal deficit and stimulating the rate of personal savings, thereby promoting the availability of affordable "patient capital" essential to semiconductor development; (ii) continuing efforts to expand foreign trade opportunities for U.S. firms by advocating free access to markets and ending such unfair trade practices as "dumping" by foreign suppliers; and (iii) acting aggressively to rebuild a viable U.S. consumer electronics industry which can, in turn, stimulate greater investment by U.S. firms in semiconductor and related technologies.

Actions of this sort, I submit, will yield substantial dividends by improving the nation's technological competitiveness in general, and maintaining an environment favorable to continued U.S. leadership in telecommunications technology in particular. In contrast, any action to undermine the competitive structure of today's telecommunications equipment industry by allowing the BOCs to enter the manufacturing business would have precisely the opposite effect.

Senator INOUYE. Thank you, Mr. Ross.

Mr. Zeglis?

Mr. ZEGLIS. Thank you, Mr. Chairman. I would like to take only a few minutes to explain why it is that this industry structure that we are discussing was ordered under the Nation's competition laws in an antitrust decree.

Very briefly, three factors control. First, we are dealing with monopolies, the telephone companies' local exchanges, and those are, of course, the epitome of the concern of the Nation's antitrust laws.

Secondly, telephone companies are not immune from the Nation's antitrust laws just because they are regulated by utility commissions. The Congress has provided no exemption there.

Thirdly, the local telephone companies are not just monopolies. They are bottlenecks for anyone who wants to compete in long distance or the manufacture of telecommunications equipment in this country.

Now, it is probably not hard to understand this bottleneck metaphor as it applies to long distance. Long distance companies can only get to their customers through the lines of the local telephone monopolies, through their bottle necks so to speak.

But we think the exchange is just as much a bottleneck, just as potent an anti-competitive weapon in the manufacture of telecommunications equipment.

Let me explain by taking the equipment that the local monopolies use in their local networks, switches, transmission lines and such.

The local exchange is the only game in town. You either sell to the local company or you do not sell at all. If the local company is buying only from its affiliated manufacturer, as the old Bell system did 95 percent of the time, you are out of business. There is no such thing as selling to the local company's competition because there is no competition.

Next, if I am the manufacturer, I have got to know what the local company is going to need in its network, and how the new equipment is going to connect to the old. I have to have information about how the exchange is being engineered. But if the local company tells its affiliated manufacturer first, he will always beat me to the market with the right equipment.

Finally, because the telephone company runs a monopoly local exchange, it can cross-subsidize, as we have heard in earlier questions. It can charge manufacturing development expenses to its monopoly telephone operations. And in our experience, no set of regulatory rules can identify and control the allocation of a local telephone company's research and development and network engineering costs.

As a result, the monopoly's affiliated manufacturer can appear to have lower equipment costs in the market even though the rest of us may really be more efficient. It is just that we do not have a monopoly to pay the costs for us.

Now these problems in the 1970s proved absolutely intractable to regulation, and for these reasons the government pursued the break up of the Bell system. In fact, it pursued it for over 30 years in the antitrust courts, and so did our competitors pursue us in those courts.

We denied their allegations, but the controversies just would not go away. And from the government's point of view, worst of all, was that despite having the Bell System under this microscope, despite having layer after layer of regulation laid on us to assure fair dealing, there just was not much competitive entry.

So in the end, we agreed to the decree that gave the government exactly what it had been seeking in its antitrust case against the Bell system. Now my colleagues here have described the benefits that we are getting from this industry structure.

Let me say only that this application of the nation's competition policy to our industry has been repeatedly affirmed by the courts. When the decree was first proposed, the District Court conducted a searching inquiry before approving the decree, as in furtherance of the nation's competition policies.

That decree then went on up to the United States Supreme Court where Judge Greene was affirmed. Since then the D.C. Circuit Court of Appeals has on at least four separate occasions acknowledged and affirmed this competitive theory of the decree as it applies to the injunctions against long distance and manufacturing.

Most recently the Court of Appeals affirmed the District Court's decision in its first triennial review to continue the manufacturing restrictions. If I may, the Court of Appeals recognized the inherent problem of what it called a local company's "self-dealing bias" when it buys from itself. And the Court of Appeals explained how rate payer's subsidy of an RBOC manufacturing operation could allow the RBOC, and I am quoting again, "to raise prices in the foreclosed segments of the equipment market, by disguising inflated equipment prices as costs" in the local exchange market.

The Court went on to hold that the BOCs had not met their burden of justifying relief. In that holding, the Court agreed not only with AT&T but with virtually all of the consumer groups, both large and small, that participated in the judicial proceedings.

So, Mr. Chairman, in our opinion, the country's basic charter of economic freedom, the Sherman Act, has been applied in this case time and time again to produce pro-competitive, pro-consumer results and under those conditions we do not believe that any change is warranted.

Thank you.

[The statement follows:]

STATEMENT OF JOHN D. ZEGLIS

SENIOR VICE PRESIDENT AND GENERAL COUNSEL, AT&T

Mr. Chairman and members of the Subcommittee: My name is John D. Zeglis. I am Senior Vice President - General Counsel and Government Affairs of American Telephone and Telegraph Company ("AT&T"). We greatly appreciate the Subcommittee's invitation to appear today to discuss the Modification of Final Judgment (sometimes referred to as the "Decree") and the Decree's line of business injunctions on the divested Bell Operating Companies ("BOCs") and their Regional Holding Companies ("RHCs").

My testimony is divided into four parts. First, it will discuss the antitrust basis and background for the Decree and how the Decree was a response to initiatives of the Congress and the FCC as well as decades of antitrust proceedings. Second, it will describe how the experience of the last six years has witnessed the very competitive conditions and consumer benefits that the antitrust laws are designed to advance. Third, my testimony will address the Court's 1987 holding that there have been insufficient changes in the BOCs' local exchange facilities to warrant any change in the Decree's two core line of business injunctions -- the manufacture of telecommunications products and the provision of interexchange services -- but that the other two injunctions originally in the Decree could be modified. Finally, my testimony will show that, contrary to some claims, the judiciary's role in administering the Decree is precisely the role federal courts have historically played in overseeing the numerous similar decrees entered under federal law, and there is thus no basis to consider changing or abridging the District Court's role.

I. THE ANTITRUST BASIS FOR THE DECREE.

The Modification of Final Judgment (or "Decree") granted the United States the structural antitrust relief that the Justice Department had sought in over three decades of antitrust litigation with the formerly integrated Bell System. The January 1, 1984, divestiture split the Bell System between its monopoly local exchange businesses (assigned to the BOCs) and its competitive long distance and manufacturing businesses (assigned to AT&T). The Decree originally contained four line of business injunctions and barred the BOCs from (1) interexchange services, (2) equipment manufacturing, (3) information services, and (4) nontelecommunications businesses.

The line of business injunctions are the "necessary counterpart" of this divestiture. By precluding the BOCs from reentering the long distance and manufacturing businesses, the line of business injunctions assure that the divested BOCs will not recreate the very combinations and controversies that the divestiture was designed to end. At the same time, the Decree was carefully fashioned to create an industry structure for telecommunications that would not only promote competition in long distance, manufacturing, and other markets, but also protect ratepayers, prevent balkanization of the national network, and promote America's international competitiveness and balance of payments.

Both the divestiture and the corresponding line of business injunctions received broad support among the 600 commentors that participated in the public interest proceedings which led to the entry of the Decree by District Judge Harold H. Greene. And each rests on a fact that the District Court, the Court of Appeals for the District of Columbia Circuit, and numerous other antitrust courts have recognized: it creates profound competitive controversies and threatens vital national interests for a BOC to use its control of local exchange networks unfairly to advantage its participation in competitive businesses that depend on "access" to these local exchanges or information about them.

These points are demonstrated by a brief review of (1) the antitrust litigation against the Bell System, (2) the fact that state and federal public utility regulation could not prevent these controversies, (3) the enormous costs that this antitrust problem imposed on the nation, and (4) the explicit antitrust findings that the District Court made when the Decree was entered and that appellate courts have since reaffirmed.

A. The 1949 and 1974 Government Antitrust Cases And The More Than 70 Private Suits

Prior to 1984, the Bell System had been a single enterprise that participated in monopoly and related competitive businesses alike. Through the BOCs, the Bell System owned the local telephone exchanges, which everyone recognized to be natural monopolies that could not feasibly be duplicated. Through AT&T and Western Electric, the Bell System also participated in three actually or potentially competitive businesses that depended on access to the local exchange monopolies: (1) long distance or "interexchange" services, which require access to local telephone facilities to originate and terminate calls; (2) the manufacture of telecommunications equipment (including equipment located on customer premises), most of which was purchased by the BOCs and all of which requires access to information about the evolving technical characteristics of the network's local exchanges; and (3) the provision of a very few "information services" (i.e., time, weather, and sports information), which similarly require use of local telephone facilities for transmission of the information.

In the 35 years that led up to the Decree, the United States brought two separate antitrust actions to break up the Bell System: the first in 1949 (United States v. Western Electric, No. 17-49 (D.N.J.)) and the second in 1974 (United

States v. AT&T, No. 74-1698 (D.D.C.)). The basis for each was the Justice Department's contention that the structure of the Bell System was inherently anticompetitive.

The Department proceeded under the theory that a firm with a lawful monopoly violates Section 2 of the Sherman Act if it "leverages" that monopoly to impede or foreclose competition in a related market -- even if the firm neither monopolizes nor attempts to monopolize that second market -- and that a monopolist acquires special duties if it controls an "essential facility" or a "strategic bottleneck" to which competitors require nondiscriminatory access.* Judge Greene and other courts found that this dual control over the local telephone exchange monopolies and related competitive business gave the Bell Companies both the "ability" and the "incentive" to foreclose competition in the long distance and equipment manufacturing markets through discrimination and cross-subsidization. *See, e.g.*, *United States v. AT&T*, 552 F. Supp. 131, 187 (D.D.C. 1982), *aff'd sub nom. Maryland v. United States*, 460 U.S. 1001 (1983); *Litton Systems, Inc. v. AT&T*, 700 F.2d 785, 798-802 (2d Cir. 1983), *cert. denied*, 404 U.S. 1073 (1984).

---

* *See Otter Tail Power Co. v. United States*, 410 U.S. 366, 377 (1973); *Northwestern Pacific Railway v. United States*, 356 U.S. 1, 11 (1958); *Times-Picayune Publishing Co. v. United States*, 345 U.S. 594, 608-09 (1953); *United States v. Griffith*, 334 U.S. 100, 107 (1948); *M.A.P. Oil Co. v. Texaco*, 691 F.2d 1303, 1305-06 (9th Cir. 1982); *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 275-76 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093 (1980); *Sargent-Welch Scientific Co. v. Ventron Corp.*, 567 F.2d 701, 709, 711-13 (7th Cir. 1977), *cert. denied*, 439 U.S. 822 (1978).

Equipment Manufacturing. The Department claimed that the Bell System's control over the local telephone exchanges inherently foreclosed competition in equipment manufacturing markets. In the Department's view, the Bell System could, and had, misused its local monopolies to foreclose competition in these markets in three different ways.

First, in numerous episodes in United States v. AT&T, the Department charged that the BOCs and their centralized engineering affiliate, Bell Laboratories, had "discriminated" against the Bell System's manufacturing competitors in providing access to essential technical and engineering information about the local exchange networks. Specifically, the Department contended that the Bell System's manufacturing affiliate, Western Electric, had been provided with preferential access to technical data, compatibility standards, information about the BOCs' needs and requirements, and other information about the evolving characteristics of the local exchanges that was essential to the design and manufacture of equipment for sale to the BOCs. See Plaintiff's Memorandum in Opposition to Defendant's Motion For Involuntary Dismissal, United States v. AT&T, No. 74-1698 (D.D.C.), pp. 49-51, 296-359, 366-410 (August 16, 1981) (hereinafter cited as "August 16, 1981, DOJ Memorandum"); Competitive Impact Statement, United States v. AT&T, No. 74-1698 (D.D.C.), p. 15 (February 10, 1982) (hereinafter cited as "Competitive Impact Statement").

For example, the Department alleged that, "[b]y setting technical or compatibility standards and by either not communicating these standards to the general trade or changing them in mid-stream," the Bell System gave its manufacturing affiliate a "headstart" and insuperable advantages in designing equipment for use with the BOCs' local exchanges. See United States v. AT&T, 524 F. Supp. 1336, 1372 (D.D.C. 1981). This headstart allegedly assured that Western Electric would have the only products on the market that met the BOCs' requirements, such that the product could be purchased at inflated prices, and regulatory authorities would have no realistic alternative to passing these inflated prices through to ratepayers. See August 16, 1981, DOJ Memorandum, pp. 49-51; Competitive Impact Statement, pp. 15, 40-42.

Second, the Department claimed that the BOCs had "subsidize[d] the prices of their equipment with the revenues from their monopoly services." See United States v. AT&T, 552 F. Supp. at 190. This allegedly permitted the BOCs to provide customer premises equipment to their customers below cost or without regard to cost, and it permitted Western Electric sales to the BOCs themselves at below-cost prices when necessary to assure that Western Electric products would be selected. Specifically, the Department and others charged that the product design and development expenses of Western Electric had been misallocated to the systems engineering and research functions that were funded by the BOCs' payments to AT&T under the License Contract, using revenues derived from their local services. See, e.g., Plaintiff's First Statement of Contentions and Proof, United States v. AT&T, No. 74-1698 (D.D.C.), p. 53 (November 1, 1978); August 16, 1981, DOJ Memorandum, pp. 366, 389-91; Competitive Impact Statement, pp. 40-42. This conduct would produce both predatory pricing that harmed competition and inflated rates that harmed consumers.

Finally, the Department claimed that when Western Electric's "privileged access to information [and other conduct] failed to foreclose competition," the BOCs would simply favor their affiliate's products, even when better or less expensive alternatives were available from unaffiliated vendors. August 16, 1981, DOJ Memorandum, pp. 28-33, 376-88, 402-10; Competitive Impact Statement, p. 15. In episode after episode, the Department charged this misconduct and alleged that the monopoly character of the BOCs' local exchanges gave them the ability to buy equipment at inflated prices, to the detriment of competition and consumers alike. The Department argued such a use of vertical integration to "evade" rate regulation and inflate consumers' rates was a per se violation of Section 2 of the Sherman Act under Byars v. Bluff City News, 609 F.2d 843, 861 (6th Cir. 1979); 3 P. Areeda & D. Turner, Antitrust Law 218-19 (1978); and other like authorities. See August 16, 1981, DOJ Memorandum, pp. 362-64.

The Department further contended that the mere existence of the vertically integrated Bell System created "suspicions" that would inhibit competition, whether or not the Bell System in fact engaged in any anticompetitive abuses. The Department claimed that, whether due to the efficiencies of integration or the perceived likelihood of abuses, firms would be inhibited from entering the American market and selling products to the BOCs so long as they were affiliated with a manufacturer. See United States v. AT&T, 524 F. Supp. at 1379-80 (quoting August 16, 1981, DOJ Memorandum, p. 51).

Interexchange Services. The Bell System's control over local exchanges produced equally intractable controversies in the interexchange market. The Department contended -- and AT&T could not dispute -- that the local exchanges were "essential facilities" for all participants in this market. The reality is that no long distance carrier can compete in this market unless it obtains access to the BOCs' local loops and other local distribution facilities that connect the long distance carrier's intercity network to consumers. Because these BOC facilities are a "natural monopoly" that no interexchange carrier can feasibly duplicate, all interexchange carriers are absolutely dependent on obtaining access to these local bottlenecks in a timely fashion and at reasonable and nondiscriminatory prices. The Department thus relied on a line of cases holding that firms controlling strategic bottlenecks must provide access to them on nondiscriminatory terms.*

---

* The Department analogized the BOCs' local exchanges to such "essential facilities" as the stadium in Hecht v.

(footnote continued on following page)

The allegations in the many episodes in United States v. AT&T set forth a vast array of charges that Bell System companies had abused these local bottlenecks to impede interexchange competition. The Bell companies were charged with denying intercity competitors access to essential facilities; discriminatory pricing of essential facilities; negotiating in bad faith over new forms of interconnection to those facilities; misallocating joint and common costs between monopoly and competitive services to "cross-subsidize" interexchange services; engaging in "price squeezes" by charging inflated rates for local access while simultaneously lowering interexchange rates; delaying release of the interface information that long distance carriers need to develop new services; and continually "shifting from one anticompetitive activity to another." See United States v. AT&T, 552 F. Supp. at 167; August 16, 1981, DOJ Memorandum, pp. 67-285; United States v. AT&T, No. 74-1698, Plaintiff's First Statement of Contentions and Proof, pp. 74-258 (November 1, 1978). In the

---

(footnote continued from previous page)

Pro-Football, Inc., 570 F.2d 982 (D.C. Cir. 1977), cert. denied, 436 U.S. 956 (1978); the warehouse in Gamco, Inc. v. Providence Fruit & Produce Bldg., Inc., 194 F.2d 484 (1st Cir.), cert. denied, 344 U.S. 817 (1952); the railroad terminal in United States v. Terminal R.R. Ass'n, 224 U.S. 383 (1912); the pipeline in Woods Exploration & Producing Co. v. Aluminum Co. of America, 438 F.2d 1286 (5th Cir. 1971), cert. denied, 404 U.S. 1047 (1972); and the power transmission facilities in Otter Tail Power Co. v. United States, 410 U.S. 366 (1973). See August 16, 1981, DOJ Memorandum, pp. 39, 76; United States v. AT&T, 524 F. Supp. at 1352-53.

Department's view, all this actual or possible conduct foreclosed competition, inhibited entry, and injured consumers and competition alike.

These allegations were not limited to the two government antitrust suits. More than 70 private antitrust cases were brought against Bell companies under these same leveraging theories by interexchange carriers,* equipment manufacturers,** and other competitors.

5

B. *Regulation*

A principal Bell System defense to these antitrust charges was that, almost without exception, the challenged conduct was not only subject to regulation, but had actually been reviewed or approved by the FCC or the state utility commissions that regulated the Bell System companies.

---

* *See*, *e.g.*, *Southern Pacific Communication Co. v. AT&T*, 556 F. Supp. 825 (D.D.C. 1982), *aff'd* 740 F.2d 980 (D.C. Cir. 1984), *cert. denied*, 470 U.S. 1005 (1985); *MCI Communications Corp. v. AT&T*, 708 F.2d 1081 (7th Cir.), *cert. denied*, 464 U.S. 891 (1983); *Data Transmission Corp. v. AT&T*, No. 76-1544 (D.D.C.); *MCI Communications Corp. v. AT&T*, No. 79-1182 (D.D.C.); *Southern Pacific Communications Corp. v. AT&T*, No. 83-0094 & MDL 550 (N.D. Cal.); *United States Transmission Systems v. AT&T*, No. 82 Civ. 1986 (S.D.N.Y.).

** *See*, *e.g.*, *International Telephone & Telegraph Corp. v. AT&T*, No. 77 Civ. 2854 (S.D.N.Y.); *Conrac Corp. v. AT&T*, No. 82 Civ. 2330 (S.D.N.Y.); *Telesciences v. AT&T*, No. 80-2445 (D.D.C.); *General Dynamics Corp. v. AT&T*, No. 82-C-7941 (N.D. Ill.); *Glictronix Corp. v. AT&T*, No. 82-4447 (D.N.J.); *Gregg Communication Systems v. AT&T*, No. 82-C-6291 (N.D. Ill.); *Jack Faucett Assoc., Inc. v. AT&T*, No. 81-1804 (D.D.C.) (and four consolidated cases); *KWF Industries, Inc. v. AT&T*, No. 83-0431 (D.D.C.); *Phonetele, Inc. v. AT&T*, No. 74-3566-FW (C.D. Cal.); *Rice International Corp. v. AT&T*, No. 82-2573 (S.D. Fla.); *Selectron, Inc. v. Pacific Northwest Bell Telephone Co.*, No. 76-965-BE (D. Ore.); *Sound, Inc. v. AT&T*, No. 76-182-2 (S.D. Iowa) (and one consolidated case); *DASA Corp. v. AT&T*, No. 83-2695 (E.D. Pa.); *Amtel Communications, Inc. v. AT&T*, No. 82-8754 (S.D.N.Y.); *Telephonic Equipment Corp. v. AT&T*, No. 82-C-8478 (S.D.N.Y.).

Indeed, the existence of this regulation had been the basis for the 1956 Judgment that settled the Department of Justice's 1949 complaint. In the 1956 Judgment, the parties stipulated to the entry of a judgment that did not order any structural relief, but that, instead, limited the Bell System to the provision of regulated services and the manufacture of equipment used for such regulated services -- thereby relying on regulation to prevent future controversies over claimed abuses of the local exchange monopolies.

Consistent with the 1956 Judgment, AT&T contended in the government case filed in 1974 and the more than 70 private antitrust cases of this period that the conduct of the Bell companies was immune from attack under the antitrust laws because that conduct was pervasively regulated by the FCC and state public utility commissions. AT&T argued that the pervasive common carrier regulation to which the Bell companies were subject under the Communications Act of 1934 (47 U.S.C. § 151, et seq.) and corresponding state public utility laws was inherently inconsistent with the free and open competition that the antitrust laws are designed to foster, and that to apply the antitrust laws to pervasively regulated conduct would unfairly impose conflicting standards and requirements on the regulated company. Accordingly, AT&T contended that the application of the antitrust laws was repugnant to the regulatory scheme and that antitrust immunity was necessary to enable the regulatory scheme to work.

Shortly after the filing of the government's complaint in the 1974 case, the District Judge who was then assigned to the case -- Judge Waddy -- stayed all other activity in the case and requested the parties and the FCC as amicus curiae to brief this basic jurisdictional issue. Both the FCC and the Department of Justice contended that the FCC's regulatory authority over the conduct being challenged in the case did not displace the antitrust laws and did not deprive the court of jurisdiction to order injunctive relief. See Memorandum of Federal Communications Commission As Amicus Curiae (filed December 30, 1975).

The District Court agreed. It held that neither the Communications Act nor the FCC's regulation had impliedly repealed the antitrust laws or otherwise deprived the Court of antitrust jurisdiction over the case. United States v. AT&T, 427 F. Supp. 57, 61 (D.D.C. 1976), cert. denied, No. 77-1009 (D.C. Cir.), cert. denied, 429 U.S. 1071, 434 U.S. 966 (1977). Both the Court of Appeals for the District of Columbia Circuit and the Supreme Court declined to review that decision. In 1978, after the case was reassigned to Judge Greene, the District Court reconsidered the immunity issue and reaffirmed that "regulation by the Federal Communications Commission and state regulatory bodies does not immunize defendants in this antitrust action." United States v. AT&T, 461 F. Supp. 1314, 1320-30 (D.D.C. 1978). AT&T made identical immunity claims in numerous private antitrust cases brought against the Bell System companies. These claims were rejected by each federal court of appeals that considered them, with the Supreme Court refusing to review these decisions.*

In its 1974 case, the Department of Justice also introduced extensive evidence to prove that regulation cannot assuage the antitrust problem created by the combination of exchange monopolies and related competitive businesses -- and that a structural remedy thus was essential. The Department's evidence showed that the local telecommunications network is so complex, so technologically dynamic, and characterized by such great joint and common costs that existing forms of public utility regulation simply could not prevent disputes or abuses. Thus, the Department claimed that regulation could not prevent discrimination in the provision and pricing of bottleneck facilities to interexchange carriers, discrimination in the provision of interface information and specifications for new products to equipment manufacturers, discrimination in the procurement of equipment, or misallocation of the BOCs' joint and common costs between competitive and monopoly activities. See, e.g., August 16, 1981, DOJ Memorandum, pp. 46-47, 125 n.*, 161-62, 281-82, 285, 374.

---

* See, e.g., Southern Pacific Communications Co. v. AT&T, 740 F.2d 980, 999-1000 (D.C. Cir. 1984), cert. denied, 470 U.S. 1005 (1985); MCI Communications Corp. v. AT&T, 708 F.2d 1081, 1101-05 (7th Cir. 1983), cert. denied, 104 S. Ct. 234 (1983); Phonetele, Inc. v. AT&T, 664 F.2d 716, 726-37 (9th Cir. 1981), cert. denied, 459 U.S. 1145 (1983); Northeastern Telephone Co. v. AT&T, 651 F.2d 76, 82-84 (2d Cir. 1981), cert. denied, 455 U.S. 943 (1982); Mid-Texas Communications Systems v. AT&T, 615 F.2d 1372, 1377-82 (5th Cir.), cert. denied, 449 U.S. 912 (1980); Sound, Inc. v. AT&T, 631 F.2d 1324, 1327-31 (8th Cir. 1980); Essential Communications Systems v. AT&T, 610 F.2d 1114, 1116-25 (3d Cir. 1979).

C. The Social Costs Of The Antitrust Problem

The Bell System vigorously defended all the conduct that was challenged in the more than 70 public and private antitrust cases -- and AT&T believes to this day that its conduct was reasonable and lawful. However, the litigation demonstrated that the mere fact of the Bell System's integration of bottleneck exchanges and related competitive businesses would continue to create antitrust controversies that threatened the Bell System, its shareholders, and the health and growth of a critical national industry -- no matter who won the pending cases.

First, the dual control of the local exchange bottlenecks and competitive businesses created inherent antitrust exposure -- and the certainty of enormous litigation costs. No single verdict could ever end the controversies. No matter who won United States v. AT&T and the other pending cases, exposure to these antitrust charges was inherent in the integrated structure of the Bell System. Under the Department's leveraging theory, virtually any competitive success by AT&T -- or failure by a competitor -- could be challenged in an antitrust court. A competitor could always claim that AT&T's success resulted from the misuse of its local exchange bottlenecks, not the efficiencies of integration. In each case, the allegation would raise a question of fact that would have to "go to the jury."

Equally important, the Bell System's integration of monopoly exchanges and related competitive businesses did more than create antitrust exposure that increased the Bell System's costs of doing business. It led to incessant antitrust, regulatory, and legislative proceedings throughout the 1970s and early 1980s that attempted to establish regulations that would prevent abuses of the local exchanges and thereby establish more level playing fields for the emerging competition.

For example, the risks of these anticompetitive abuses led to almost continuous congressional investigations and several legislative proposals during the last half of the 1970s and the early 1980s.* In 1978, a bill was introduced in the

---

* See H.R. 12323, 94th Cong., 2d Sess. (1976); H.R. 13015 95th Cong., 2d Sess. (1978); H.R. 3333, 96th Cong., 1st Sess. (1979); S. 611, 96th Cong., 1st Sess. (1979); S. 662, 96th Cong., 1st Sess. (1979); H.R. 6121, 96th Cong., 1st Sess. (1979); S. 2827, 96th Cong., 2d Sess. (1980); S. 898, 97th Cong., 1st Sess. (1981); H.R. 5158, 97th Cong., 1st Sess. (1981); MCI Communications Corp. v. AT&T, No. 79-1182, Complaint for Violations of the Antitrust Laws, Prayer for Relief, ¶¶ 6-8 (D.D.C. April 30, 1987).

House to require the Bell System to divest its equipment manufacturing operations within three years and to interconnect with all other carriers. H.R. 13015, 95th Cong., 2d Sess. (1978). Several additional bills were introduced in the 96th Congress that would have substantially rewritten the Communications Act to restrict potential anticompetitive conduct by the Bell companies. H.R. 3333, 96th Cong., 1st Sess. (1979); H.R. 6121, 96th Cong., 1st Sess. (1979); S. 611, 96th Cong., 1st Sess. (1979); S. 622, 96th Cong., 1st Sess. (1979); S. 2827, 96th Cong., 2d Sess. (1980). For example, H.R. 6121 was approved by the House Commerce Committee in August 1979. It would have required the Bell System to move any research and manufacturing operations that supported unregulated services or products to a separate subsidiary, and would have prohibited Bell companies from providing any information services that might compete with newspapers or periodicals, such as "electronic" Yellow Pages.

In 1981, the Senate passed S. 898, which is the source of several of the provisions of the Modification of Final Judgment. S. 898, 97th Cong., 1st Sess. (1981). S. 898 attempted to protect competing equipment manufacturers and suppliers from abuse of the BOCs' bottleneck position by ordering structural separation of the Bell System's research, development and manufacturing operations and by imposing restrictions on the Bell Companies' purchases of equipment from its manufacturing affiliate. S. 898 sought to protect competing interexchange carriers by requiring the establishment of "exchange telecommunications areas" within the states, and further establishing a timetable for the phase-in of "equal exchange access" by the BOCs. These interexchange and exchange access provisions of S. 898 were later incorporated directly into the Decree. See Modification of Final Judgment, Sections II(A), IV(G), and Appendix B, § A.

After S. 898 passed the Senate, legislation was introduced in the House in November of 1981 (H.R. 5158, 97th Cong., 1st Sess. (1981)) that adopted radically different solutions to the threats of competitive abuses by Bell exchange companies. The FCC pursued similar regulatory solutions.*

The Bell System thus was confronted not only with the claims in United States v. AT&T and the private antitrust suits, but also with a host of proposed and actual FCC regulations and several legislative proposals. These all sought to limit the Bell System's ability to abuse its exchanges through such devices ranging from structural requirements, to procurement quotas, to information flow rules, to interconnection standards, to pricing regulations.

---

* See, e.g., Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry), 77 F.C.C.2d 384 (1980), aff'd sub nom. Computer & Communication Industry Association v. FCC, 693 F.2d 198 (D.C. Cir. 1982), cert. denied, 461 U.S. 938 (1983); FCC CC Docket No. 78-72 (exchange access); FCC CC Docket No. 80-742 (license contracts); FCC CC Docket No. 80-53 and No. 19129 (Phase II) (Bell System procurement practices); AT&T, Manual and Procedures for the Allocation of Costs, 84 F.C.C.2d 384, modified, 86 F.C.C.2d 667 (1981), aff'd sub nom. MCI Telecommunications Corp. v. FCC, 675 F.2d 408 (D.C. Cir. 1982).

As the District Court found in 1982, the resulting uncertainty over industry structure and ground rules threatened the entire industry and the legitimate interests of all its participants. See United States v. AT&T, 1982-2 Trade Cases ¶ 64,726 at 71,526 (D.D.C. 1982). For while the regulatory, legislative and antitrust initiatives were pending, the industry participants had to wait, month after month, year after year, to learn what the "rules" and industry structure would be. While they waited, industry participants often could not move forward with new services and new investment, for fear of having to backtrack when the new "rules" were determined. Worse, industry participants bent their efforts toward prosecuting or defending the litigation (or agency or legislative proceedings) in order to influence the resulting "rules" to each participant's best advantage. As the Department of Justice contended, the mere existence of the integrated Bell System and its potential to abuse its bottleneck position inhibited many firms from entering the long distance and equipment manufacturing markets in competition with AT&T. In short, the costs of dispute dragged down all industry participants -- large and small companies, actual and potential investors, and customers of all sizes.

Under the bottleneck leveraging theory, there was only one antitrust remedy that could end the crippling uncertainty and incessant controversies: AT&T's divestiture of the local exchange monopolies of the BOCs and the imposition of corresponding line of business injunctions that would prevent the divested BOCs from reentering related competitive businesses. The Department sought this precise remedy in its 1974 case, both in the pretrial proceedings and at trial -- through three different administrations and the tenures of five different Attorneys General. The fact that this antitrust remedy was dictated by the Government's antitrust theory is vividly illustrated by the cover note that the then Assistant Attorney General for Antitrust (William Baxter) attached to the first draft of the Decree. It made one demand that was "non-negotiable": "the concept of separating the local exchange functions & confining the BOCs to local exchange functions" (December 21, 1981).*

D. The District Court's Antitrust Findings Under The Tunney Act.

Although the Decree was not AT&T's idea, AT&T decided that it was the best of the available alternatives and the only way to end the turmoil and the industry's paralysis. On January 8, 1982, AT&T consented to entry of the Department's proposed decree.

---

* Thus, the Department contended that divestiture and the Decree's line of business injunctions were "necessary complements" to one another and that the Decree's line of business injunctions are the "opposite side of the divestiture coin . . . an integral part of the divestiture . . . and proceed on precisely the same theory [as divestiture]." United States v. AT&T, No. 74-1698, Tr. 25179; id., Brief of United States, p. 30 (June 14, 1982).

Before this Decree could be entered, however, the Tunney Act required Judge Greene to conduct extensive proceedings to determine whether the proposed relief was in the public interest and to make explicit findings as to the appropriateness of this remedy. Over 600 entities submitted written comments on the Decree, including competitors in each of the relevant markets, the FCC, state utility commissions, public interest groups, and members of Congress. The commentors almost uniformly agreed that divestiture was a good idea. They also broadly agreed with the concept of line of business injunctions on the divested BOCs, although some commentors challenged some of the injunctions that the Department had proposed.

On the basis of this record and the voluminous trial record, Judge Greene found that AT&T's divestiture of the BOCs was "plainly in the public interest." United States v. AT&T, 552 F. Supp. at 223. Judge Greene similarly approved the line of business injunctions that would prevent the divested BOCs from reentering the interexchange and manufacturing markets that had been the subject of so many years of litigation.

The District Court found that the interexchange services injunction was necessary because access to the BOCs' local exchanges is "essential" for interexchange carriers and any BOC that provided these services could disadvantage interexchange carriers in a variety of ways so long as the local exchanges remained monopolies. Id. at 188. The court concluded that the equipment manufacturing injunction was necessary because "[t]here is a substantial likelihood" that the BOCs would "frustrate" competition by nonaffiliated manufacturers if the BOCs were not enjoined. Id. at 190. Although the court recognized that the information services market was evolving and uncertain, it also found that BOCs should also be excluded from that market "for reasons similar to those justifying the restriction on interexchange service." Id. at 189.*

At the same time, Judge Greene insisted that some of the proposed injunctions on the BOCs be loosened so that BOCs could participate in certain "noncore" businesses. Specifically, Judge Greene rejected the Department's proposal to enjoin the BOCs from providing "customer premises equipment" and "Yellow Pages" in connection with local exchange service. United States v. AT&T, 552 F. Supp. at 191-93 & 193-194. Judge

---

* In upholding these injunctions, the District Court rejected arguments that the creation of seven independent BOCs or the existence of state and federal regulations could eliminate the need for the line of business injunctions in the Decree. The court held that insofar as these injunctions and the threatened injuries to "competition, competitors, and ratepayers" are concerned, it is a "distinction . . . without a difference" that "the 'old' Bell System . . . was nationwide in scope while each of the seven Regional Companies possesses an equally powerful monopoly in [only] a particular geographic region." United States v. Western Electric, 627 F. Supp. 1090, 1095 (D.D.C. 1986). And the court held that "[i]f regulation could effectively prevent the [anticompetitive] practices [by these companies], there would have been no need for the AT&T action." United States v. AT&T, 552 F. Supp. at 187 n.229. See also United States v. Western Electric Co., 627 F. Supp. at 1097 n.22; id., 592 F. Supp. 846, 855 & n.20 (D.D.C. 1984).

Greene further modified the Decree's fourth line of business injunction: the "catch-all" nontelecommunications services injunction that would have excluded the BOCs from all businesses other than local exchange telephone services. Rather than impose a blanket injunction, Judge Greene established a flexible "waiver" procedure under which a BOC could enter other businesses (other than long distance, manufacturing, or information services) upon a showing that there was no reasonable likelihood that their local exchanges could be leveraged to obtain improper competitive advantages.

In so doing, the District Court stated -- and repeatedly reiterated after divestiture -- that removal of the core interexchange and manufacturing injunctions would be governed by the bottleneck leveraging theory that is the basis for the Decree. *United States v. AT&T*, 552 F. Supp. at 195. Thus, the court stated shortly after divestiture that it would not consider proposals to allow the BOCs to participate in the core interexchange and manufacturing businesses unless and until their local exchanges ceased to be bottleneck monopolies:

> "The Court will not even consider the substantive merits of a waiver request seeking permission to provide interexchange services *until such time as the Regional Holding Companies lose their bottleneck monopolies* and there is substantial competition in local telecommunications service . . . . Similar considerations govern the appropriateness of entry of the Regional Holding Companies into the information services and equipment manufacturing markets. *No significant technological or structural changes have occurred in these markets* to justify a relaxation of these

> line of business restrictions, and no requests for waivers in these markets will be considered unless and until such changes have taken place." United States v. Western Electric Co., 592 F. Supp. at 868 & n.90 (emphasis added).

The Decree, with its line of business injunctions, and the explicit standard for their removal, was affirmed by the United States Supreme Court. Maryland v. United States, 460 U.S. 1001 (1983). And in 1986, the appropriateness of this antitrust remedy was reaffirmed by the Court of Appeals for the District of Columbia Circuit, in a panel of Circuit Judge James Buckley, Circuit Judge (now Justice) Antonin Scalia, and Circuit Judge Abner Mikva. United States v. Western Electric Co., 797 F.2d 1082 (D.C. Cir. 1986), cert. denied, 107 S. Ct. 1384 (1987). As Judge Buckley's opinion stated (797 F.2d at 1088):

> "We are not troubled by U S West's observation that the decree's expansive definition of a BOC results in broad application of the decree's [line of business injunctions and] restrictions to the [the RBOCs] and other companies affiliated with BOCs. This result is consistent with the decree's objective of sharply limiting the ability of businesses with bottleneck control of local telephone service to utilize their monopoly advantages to affect competition in competitive markets."

II. COMPETITION IN THE POST-DIVESTITURE TELECOMMUNICATIONS INDUSTRY

Experience since divestiture has clearly demonstrated that the Decree is working. The industry structure that it created has allowed "more rapid and certain development of competition" in the interexchange and manufacturing markets in precisely the way that the Department and the District Court found that it would. Competitive Impact Statement, p. 8; United States v. AT&T, 552 F. Supp. at 160-66. As the former Chief of the Antitrust Division of the Justice Department stated, these markets have experienced "the introduction, at an unprecedented pace, of innovative products and services coupled with dramatic price reductions" in the years since divestiture."*

The developments and consumer benefits in the interexchange markets could scarcely be more dramatic. New long distance companies have entered this market "in reliance upon the competitive safeguards and industry structures provided in the Consent Decree," and especially on the fact that the Decree assures that owners of essential local exchange facilities may not compete in this market. Comments of National Communications Network, United States v. Western Electric, No. 82-0192, p. 4 (March 13, 1987). Today, there are literally hundreds of interexchange carriers in competition with AT&T.

The benefits to consumers have been extraordinary. Interexchange rates have declined over 45 percent since divestiture. Consumers have a choice of long distance carriers, and interexchange carriers have developed and are introducing new services that benefit residential customers (e.g., AT&T's "Reach-Out America" and "Call Me" plans); small business customers (e.g., AT&T's "Pro-America" plan); and large customers (e.g., AT&T's Software Defined Network) at breakneck speeds.

---

* Testimony of Douglas H. Ginsburg concerning S. 2565, The Federal Telecommunications Policy Act of 1986, before Senate Committee of Commerce, Science and Transportation, p. 4 (September 10, 1986) (hereinafter cited as "Ginsburg Testimony").

The Decree has had the same effect in the telecommunications equipment manufacturing market. As one industry analyst has concluded, the United States equipment market consists today of AT&T, "a half-dozen towering international firms . . . plus one to two hundred key smaller firms of diverse heights and architecture," plus literally hundreds of even smaller recent entrants.* Indeed, since divestiture, new firms have entered the American market to supply residential telephones, key systems, private branch exchanges, central office switches, and transmission equipment; prices for each of these types of equipment have dropped; and the BOCs are continually establishing relationships with new suppliers. For example, BellSouth has agreed to purchase digital central office equipment from Plessy; U S West is buying similar equipment from Ericsson; and Siemens and other manufacturers have sold this equipment to other BOCs. See Communications Daily, p. 5 (April 8, 1987).

---

* J. Michael Guite, Ph.D, Salomon Brothers, Stock Research on Telecommunications Equipment, the United States Market, p. 11 (February 1987).

Against this background, it is not surprising that consumers have been the most virulent opponents of any modification of the Decree's interexchange and manufacturing injunctions. In the triennial review proceedings before the District Court in 1987, representatives of both small customers (e.g., the Consumer Federation of America) and large customers (e.g., the Ad Hoc Telecommunications Users Association and the International Communications Association) uniformly opposed any relaxation of these injunctions and made extensive arguments that the Decree's line of business injunctions on the BOCs are essential to consumer welfare.

III. THE DISTRICT COURT'S 1987 DECISION MODIFYING THE DECREE'S LINE OF BUSINESS RESTRICTIONS

In its decision approving the Decree, the District Court recognized that technological developments could at some time in the future erode the BOCs' local exchange bottlenecks and obviate the need for some or all of the line of business restrictions in the Decree. See United States v. AT&T, 552 F. Supp. at 194-95. Accordingly, the court directed the Department of Justice to submit a report to the Court every three years concerning the continued need for the line of business injunctions.

On February 2, 1987, the Department submitted its first such report. It proposed that the court could remove the line of business restrictions that prevented the BOCs from manufacturing telecommunications equipment, providing information services, and entering unrelated nontelecommunications markets. The Department also proposed that the prohibition against the provision of interexchange services by the BOCs could be relaxed to permit the BOCs to provide cellular radio, paging, and other mobile interexchange services.* Thereafter, the BOCs filed motions with the District Court seeking the removal of all the Decree's line of business restrictions.

In an opinion issued on September 10, 1987, 673 F. Supp. 525 (D.D.C. 1987) (hereinafter cited as "September 10 Opinion"), Judge Greene denied these motions in part and granted them in part, holding that two of the four line of business injunctions would be modified.

A. Retention of Core Injunctions.

The District Court refused to modify the "core restrictions" enjoining the BOCs' provision of interexchange services and manufacture of telecommunications products. The court's opinion reviewed the events that led up to the trial of the 1974 government case, the evidence introduced by the Department at trial, and the public interest proceedings on the Decree. It reaffirmed that these line of business restrictions were the "necessary counterpart" to the divestiture that occurred on January 1, 1984, and were essential to prevent abuses of the local exchange bottlenecks and to "end over thirty years of strife in the telecommunications industry." September 10 Opinion, 673 F. Supp. at 529-35. The court held that there had been no changes in the BOCs' local exchanges or in the regulation of them that could remotely support modification of these core injunctions.

---

* The Department's February 2, 1987 Report initially proposed that the BOCs should be permitted to provide interexchange services between points outside their regions and should further be authorized to provide in-region interexchange services where entry barriers were eliminated by state regulators. However, the Department withdrew these recommendations on April 27, 1987.

First, the District Court held that there was "no basis" in fact for any claim that the BOCs "do not retain their monopoly power over the local bottlenecks." September 10 Opinion, 673 F. Supp. at 537. The court pointed out that the Department of Justice, its expert, Dr. Peter Huber,* and almost all the parties and intervenors agreed that the BOCs' local exchange facilities had not lost their monopoly characteristics. The evidence overwhelmingly established, and the Court found, that the local exchanges continue to be a monopoly," that "no substantial competition exists at the present time in the local exchange service," and the large customers and small customers alike are absolutely dependent on the BOCs for exchange and exchange access. Id. at 536-40. In this regard, the court found that "bypass" of the BOCs' local exchange bottlenecks has been virtually nonexistent to date. It found that the BOCs' local exchange facilities are used to provide access for "99.9 percent of all interexchange carrier traffic, generated by 99.9999 percent of the nation's telephone customers." Id. at 540.

---

* Although the Department's expert, Dr. Huber, predicted the eventual emergence of a "geodesic" network, the court pointed out that no such geodesic network presently exists and that such developments "will, if ever, impact the Regional Companies bottleneck control only in the future." Id. at 539.

In short, the District Court found that local exchange "monopoly bottlenecks continue to exist essentially in unchanged scope and form, and that they continue to provide the same basis for anticompetitive activity as they did prior to the Bell System break-up." Id. at 543. Accordingly, the court held that the "core" line of business injunctions against interexchange services and equipment manufacturing remain necessary to prevent leveraging of local monopolies by the BOCs.

In this regard, the September 10 Opinion considered and rejected arguments that there had been changes in other conditions that could justify elimination of the core restrictions. The court held that the fact that there are seven Regional Companies, whereas there was only one Bell System "does not constitute a new development;" the court noted that the fact that there would be seven divested companies was a premise of "the very same decree" that imposes the line of business restrictions. Id. at 547. The court similarly rejected the arguments that the BOCs' compliance with their "equal access" obligations could be grounds to eliminate the core injunctions. It reasoned that "[i]f equal access had been all that was involved, the decree could have simply mandated the Bell System to provide such access." Id. at 548.

Finally, the court rejected arguments that there had been regulatory changes that could justify elimination of the injunctions. The court emphasized that the Decree was entered because regulation "had simply not been capable of preventing the antitrust problems that the decree was to resolve" (id. at 541), and, indeed, the Decree rests on the findings that such regulatory measures could not "approach even remotely" the effectiveness of structural separation (see id. at 568), and that regulatory measures had proven "entirely inadequate" to prevent anti-competitive abuses of the local exchange bottlenecks. Id. at 567, 579. And the court found there had been no change in the character of regulation in the three years since divestiture. To the contrary, the court found that the changes in the past three years consisted of modifying pre-existing regulatory requirements to make them less stringent. Id. at 567-79.

With respect to the equipment manufacturing injunction, the court held that it "mirrors" the "core" injunction on interexchange services. Id. at 552. In the September 10 Opinion, the court found the continuation of the BOCs' local exchange monopolies means that "their incentive and ability to act anticompetitively" and foreclose competition in equipment manufacturing have not changed, and, indeed, that the exclusion of competitors was certain if this injunction were removed. As the court stressed: "The Department of Justice concedes that if the restriction [on equipment and manufacturing] were lifted, each of the Regional Companies would satisfy all or nearly all of its equipment needs from its own manufacturing affiliate," and independent equipment manufacturers would thereby be foreclosed from a very substantial portion of the equipment market. Id. at 556 (emphasis in original). The court concluded, therefore, that removal of the equipment manufacturing injunction "would be likely to extinguish or substantially curtail the healthy competitive domestic market that has emerged in the last three years" and foreclose competition in the design of equipment for the BOCs' exchanges. Id. at 562.

In refusing to end these two core restrictions, the District Court also relied on the fact that in the years since divestiture, competitors have repeatedly alleged that BOCs have misused their exchanges to engage in discriminatory activities and cross-subsidization in the few competitive markets available to BOCs under the Decree. Id. at 580-81. In two of these instances, AT&T was the complainant, and the Decree meant that AT&T was not required to file separate antitrust suits and incur the associated expense and delays of discovery and proving damages, but obtained a swift and certain remedy under the Decree.* Conversely, if the Decree's injunctions were modified, these swift remedies would disappear, and the post-divestiture AT&T and the many firms that have entered these markets since divestiture would again be remitted to filing suits, episode by episode, in district courts throughout the country and recreating the very burdens on the industry that the Decree sought to end.

The Court of Appeals for the District of Columbia Circuit recently affirmed the District Court's refusal to lift the manufacturing and interexchange restrictions. United States v. Western Electric Co., No. 87-5388, slip op. (D.C. Cir. April 3, 1990). The Court of Appeals noted that there was no dispute that the BOCs continue to possess bottleneck monopolies in local exchange services. Id. at 27. Because the core line of business restrictions in the Decree had been approved only after an explicit finding by the District Court that otherwise "the BOCs would have both the incentive and the ability to use their local exchange monopoly to impede competition" in the markets covered by those restrictions, the

---

* The District Court enjoined one BOC, Pacific Telesis, from refusing to provide essential local facilities that AT&T needed to provide an interexchange public telephone service in competition with Pacific's coin and coinless telephones. United States v. Western Electric Co., 583 F. Supp. 1257 (D.D.C. 1984). Similarly, in 1986, the court enjoined U S West from seeking to replace the interexchange switching service that AT&T provides to the United States government by offering special low rates for bottleneck access facilities only if GSA agreed to obtain these services from U S West. United States v. Western Electric, Opinion (November 26, 1986).

Court of Appeals concluded that the BOCs could obtain relief from those restrictions only by establishing "that something is different now from the time when the decree was entered so that they can no longer use their monopoly power to impede competition." Id. at 34. The Court of Appeals agreed with the District Court's conclusion that the mere existence of the seven RHCs created by the decree therefore was not itself significant, particularly in light of the undisputed continuation of their monopoly power. Id. at 34-35.

With respect to interexchange services, the Court of Appeals noted that the BOCs had not even seriously contested on appeal the Department of Justice's arguments that (1) existing FCC regulation was not designed to prevent anticompetitive conduct by BOCs if they were allowed to enter the interexchange market; (2) in any event, violations of regulatory equal access requirements "are extremely difficult to detect and remedy;" and (3) it would be easier for BOCs to acquire market power in the interexchange market because of the newly-competitive and capital intensive nature of that market. The Court of Appeals therefore affirmed the conclusion that the interexchange restriction should not be lifted. Id. at 38-39.

The Court of Appeals also affirmed the District Court on the manufacturing restriction, giving great weight to the Department of Justice's assumption that an RHC which manufactured equipment would purchase substantially all of its requirements from its affiliate, regardless of price or quality. The Court of Appeals affirmed that, even if this resulted in the foreclosure of only 5-15% of the telecommunications equipment market, the result would be to give a BOC the incentive and opportunity effectively to charge higher prices for the equipment that it produced through undetected cross-subsidization from the local exchange market. Thus, the BOC would be able to leverage its local exchange monopoly power into the equipment market, the very result that the Decree was designed was to prevent. Id. at 31, 43-44. Similar cross-subsidy concerns had been noted by the Court of Appeals in an earlier decision, which affirmed the District Court's interpretation of the scope of the Decree's manufacturing restriction. United States v. Western Electric Co., No. 88-5050, slip op. (D.C. Cir. February 2, 1990).

In short, Judge Greene's 1987 decision to maintain the core line of business injunctions under current circumstances is the only result that can be reconciled with basic antitrust principles and the basis upon which the Decree was held to be in the public interest. However, the Decree's line of business injunctions do more than promote competition. They are essential to such vital national interests as promoting foreign trade, preventing balkanization of the national telephone network, preserving reliable, high quality service, and protecting ratepayer interests and universal service. In its

September 10 Opinion, the Judge Greene found that retention of the core interexchange and manufacturing injunctions is necessary to advance each of these objectives.

Foreign Trade. The Decree was carefully fashioned to assure that AT&T would not be foreclosed from any portion of the American market and thus be "preserved" as a "dynamic force" capable of competing in national and international markets. United States v. Western Electric Co., 569 F. Supp. 1057, 1120 (D.D.C. 1983). However, as the District Court, the Department of Commerce, the Justice Department and Dr. Huber each found, the removal of the manufacturing injunction would have created a market structure in which BOCs would have incentives to form joint ventures with established foreign manufacturers, to purchase equipment from these foreign firms exclusively, and to foreclose the only free market in the world to AT&T, America's leading full-line telecommunications equipment manufacturer. September 10 Opinion, 673 F. Supp. at 556 n.135, 557 n.141, 562.

The foreign trade consequences of lifting the manufacturing restriction would be devastating. Such a move would simultaneously (1) foreclose American markets to American firms; (2) deny American firms the revenues needed to sustain the research and development needed to sell equipment in Asian, Middle Eastern, and other foreign markets; and (3) give foreign firms captive markets and guaranteed sales in this country. The consequences would be especially severe because Japanese and European manufacturers have, to date, largely excluded AT&T from Japan, Germany, France, and other European markets. Removal of the injunction would have the extraordinary consequence that foreign firms might form alliances with the BOCs to exclude AT&T and other American firms from the American market as well.*

Prevention of Balkanization. Removal of the core line of business injunctions would also threaten the high quality and reliable telephone service that is critical to the nation's businesses, residences, and defense. Specifically, the Justice Department's recommendation to eliminate some or all of the core restrictions would, by its terms, have required severe curtailment of the BOCs' joint centralized engineering activities through Bell Communications Research (Bellcore). Id. at 559. Upon entering the Decree, the District Court found that these activities are essential to the "very survival" of the national telecommunications network and that the alternative to Bellcore is "balkanization," "deterioration and fragmentation of the national telephone system," and the transformation of this national resource in a system like Europe's. United States v. Western Electric Co., 569 F. Supp. at 1118.

---

* It is for these reasons that the Department of Commerce found in its submission to the Decree Court that the Department's manufacturing recommendation would likely damage foreign trade. See NTIA Trade Report, p. iv.

In rejecting the proposals to eliminate the core restrictions, the September 10 Opinion reiterated these findings in the strongest terms. The Court held that removal of the core restrictions would be unthinkable when such fragmentation would result (673 F. Supp. at 559):

> "Bellcore has responsibility under the decree to prevent the technical fragmentation and hence the deterioration of the national telephone network. . . . To decentralize or otherwise to limit the responsibilities of Bellcore so as to prevent its uses as a vehicle for anticompetitive action by the Regional Companies would inevitably fragment and frustrate Bellcore's centralizing responsibilities which, notwithstanding the divestiture, permit the nation's telecommunications systems to continue to function on the basis of one national network with one national quality standard."

In affirming the continuation of the core restrictions, the Court of Appeals did not directly address the balkanization question. And because it concluded that foreign trade and ratepayer protection were not directly relevant to the removal standard embodied in the decree, it also did not address the substance of the concerns expressed by the District Court on those subjects. It certainly did not, however, suggest that those subjects are not important public policy concerns -- as they plainly are.

B. Modification of Noncore Restrictions.

In the September 10 Opinion, the District Court also modified the two line of business injunctions that were not at issue in the 1974 Government suit and the other antitrust litigations of the 1970s and 1980s.

First, the court eliminated entirely the Decree's "catch-all" restriction on the BOCs' provision of nontelecommunications services. The Court found that the likelihood that the BOCs would leverage their control over the local exchanges to gain an unfair competitive advantage in unrelated nontelecommunications markets was relatively small, whereas the removal of the restriction would eliminate the burdensome waiver process and permit the BOCs freely to participate in these markets without the involvement or supervision of the Court. Noting that it had already granted over 160 waivers of this restriction, the court concluded that the benefits from its elimination outweighed the danger that the BOCs might engage an improper cross-subsidization of competitive activities. September 10 Opinion, 673 F. Supp. at 597-99, 602-03.

Second, and more significantly, the court held that part of the information services injunction could be lifted, permitting the BOCs to perform a wide range of information _transmission_ (or "gateway") functions, but continuing to bar their provision of information _content_. The court noted that because the BOCs' exchanges continue to be natural monopolies the BOCs continue to possess the ability to use their exchanges to foreclose competition in information services, and concluded that there is no justification for eliminating the information services injunction in its entirety. _Id._ at 564-67, 595-96. At the same time, the court was concerned that the BOCs' provision of the "infrastructures" and "gateways" for the information services of others may be an essential condition for the widespread availability in this country of the kind of information services that are becoming available in France, Great Britain, and Japan. The court rejected the suggestions of the Department of Justice and others that it could not consider these consumer interests in its modification decision, and the court held that it would modify the Decree to assure the broadest availability of information services to consumer. Id. at 583-85, 596-97.

The court "concluded that the apparently competing interests -- prevention of monopolization of information services versus broad availability of such services to the public -- can be reconciled by severing for decree purposes the generation of information content (which will remain prohibited to the Regional Companies) from the transmission of information services (which the Regional Companies will be allowed to provide)." Id. at 603. Thus, the court stated that it will modify the information services injunction to permit the RHCs' to provide the five functions found to be necessary to an information services gateway,* and ordered further proceedings to consider the precise scope of the modification. Id. at 587-97, 603-04.

---

* These are: (1) data transmission, (2) address translation, (3) protocol conversion, (4) billing management, and (5) introductory information content.

The further proceedings contemplated by the September 10 Opinion were conducted in late 1987 and early 1988, and gave the BOCs and interested parties the opportunity to propose precisely how the BOC gateways should be constituted to provide the most effective information services infrastructure. In its March 7 and June 22, 1988 decisions, the court adopted the suggestions of the BOCs and other parties and ruled that the gateways could be used to provide to consumers a broad range of services.

In particular, the court held that the BOCs could offer information providers the opportunity to store their information databases in the BOC gateways (and hence reduce transmission costs), and could offer "kiosk billing" (i.e., the billing of a flat rate per minute by a BOC for a consumer's use of any of the information services accessible through the gateway, with a portion of the proceeds remitted to the information provider). Further, the court held that the BOCs could store and provide to consumers "menu" information about the contents and use of the gateways. Finally, the court concluded that voice storage and retrieval and electronic mail functions were also permissible to the BOCs, allowing the BOCs to offer (through the gateways or otherwise) a wide range of voice messaging and electronic mail services directly to consumers. See June 22 Opinion, 690 F. Supp. 22 (D.D.C. 1988).

Because no party to the Decree had opposed elimination of the entire information services restriction (including the generation of information content), the Court of Appeals concluded that that issue should have been analyzed under a "public interest" standard rather than the more specific standard of Section VIII(C) of the Decree. It therefore remanded to the District Court the question whether the entire information services restriction should be lifted, for a *de novo* determination by the District Court whether such removal would be anticompetitive or otherwise disserve the public interest under present market conditions.

IV. THE ROLE OF THE DISTRICT COURT

Pursuant to the retention of jurisdiction provisions in Section VII of the Decree, the District Court has, since the Decree was entered, been responsible for hearing and resolving the numerous motions parties have filed, seeking enforcement or modification of the Decree (including the line of business injunctions). Although some parties now claim that this responsibility has involved the District Court too deeply in telecommunications "policy" matters, the fact is that the District Court's role has been fundamentally identical to the traditional responsibilities of federal courts to oversee and administer similar decrees entered under the antitrust and other federal laws.

Consent decrees have been utilized extensively by the federal government to enforce laws and to implement policies of the Executive Branch. The Antitrust Division of the Department of Justice has been party to over 1,000 decrees entered since 1932, approximately 225 of which were entered within the last 10 years; consent decree modifications also occur frequently, as evidenced by the nearly 40 decrees modified since 1979.* See Appendix A.

These decrees involve a broad spectrum of antitrust violations regarding mergers and acquisitions, boycotts, collusive bidding, monopolization, price fixing, tying arrangements, patent licensing, warranties, exchange of information and exclusive dealing, among others. Moreover, they affect a broad range of industries and professions involving every imaginable service and commodity (see Appendix B). A review of 33 consent decrees terminated between 1984 and 1988 demonstrates that most decrees endure for a period extending beyond 25 years (see Appendix C). Moreover, consent decrees generally contain a "Jurisdiction Retained" provision stipulating that the court retains jurisdiction of the case and thus may issue any further orders and directions necessary regarding the construction of the judgment, the propriety of the conduct of the parties thereunder, and the modification or enforcement of the decree.

---

* 1932 through 1988 Trade Cas. (CCH), Special Index, Antitrust Decrees.

Judicial consent decrees have also become prevalent in environmental litigation. Since January 1, 1987, there have been 117 Superfund consent decrees. The decrees involve firms in a wide variety of industries, including oil companies, chemical companies, food processors, pharmaceutical/health and beauty care firms, can manufacturers, car and truck manufacturers, electronics firms, plastics manufacturers, aluminum processors, transit authorities, hospitals, churches, educational institutions, utilities, aerospace equipment manufacturers, and waste treatment, storage and disposal firms.* The duration of these decrees is in each case contingent upon some remedial action aimed at "cleaning up" the waste disposal site -- that is, an injunction requiring a company to take (or refrain from taking) certain steps.

Similarly, judicial decrees are commonly used to resolve claims brought by the Equal Employment Opportunity Commission ("EEOC") in labor discrimination cases. During 1987, 356 labor discrimination suits were resolved, 151 of which culminated in judicial consent decrees.** As in the environmental and antitrust areas, many different industries and organizations have been parties to these decrees, including banks, department stores, restaurants, management firms, travel agencies, insurance companies, communications companies, and social service organizations. The decrees generally dictate specific activities a party must undertake, or refrain from undertaking, regarding its recruiting, hiring, promotion and transfer policies, and the decree also frequently establishes "back pay" and other mandatory injunctive requirements. The courts that enter these decrees are also involved on a continuing basis in the monitoring of and enforcement of the decrees.

---

* The Information Network for Superfund Settlements maintained by Morgan, Lewis & Bockius.

** Equal Employment Opportunity Commission, A Report On The Operations Of The Office of the General Counsel, October 1986 through September 1987, Appendix D, Summary of Cases Resolved in Fiscal year 1987, submitted July 11, 1988.

* * *

The foregoing history of the Decree and its application and enforcement reflect a careful balance between encouraging maximum participation by the BOCs in serving the needs of telecommunications consumers, on the one hand, and protecting legitimate and vital competitive interests on the other.

The Decree itself incorporates the flexibility to take account periodically of changing conditions that could justify modification of some or all of the Decree's restrictions. The District Court's administration of the Decree has consistently reflected this flexibility, as evidenced by the substantial modifications ordered in the September 10 Opinion and the broad definition of information gateways adopted in 1988. If other conditions underlying the Decree restrictions change, moreover, the procedures prescribed in the Decree ensure that these conditions can be fully considered -- as part of a triennial review or otherwise -- and the Decree modified as appropriate.

By the same token, however, the antitrust history of the Bell System confirms that for so long as the essential economic underpinning of the Decree -- the bottleneck character of the BOCs' exchanges -- does not change, entry by a BOC into the long distance or manufacturing businesses that remain dependent on access to (or information about) these exchanges can only recreate the anti-competitive and anti-consumer controversies that the Decree ended.

Senator INOUYE. Thank you very much. I will call upon Senator Hollings.

The CHAIRMAN. I enjoyed that description, Mr. Zeglis, of the proceedings. As I remember it, there were no less than 12 orders by the Federal Communications Commission outstanding on AT&T, none of which could be enforced because the lawyers were smarter than the commissioners and the government, and they kept appealing them up and I can see that they still have the best of lawyers.

So we will agree with what you have said, but it will be amusing later to read that description, particularly when you say you cannot deal with yourself. Now what a horrible thought.

Let me say this, Mr. Ross, before I get into this point, I agree with you, but do not put us off on semiconductors and communications. Call up Secretary Cheney, just like I am doing right now because they let Craig Fields go over there, head of DARPA. He is right down your alley and my alley and we have been fighting like the devil.

I would prefer that all of this research would be done on the civil side. We are trying to get the Department of Commerce into it;

Fields has done an outstanding job and that is really where you and I ought to be calling and telling Cheney to change that decision by Darman and Boskin; they do not know a blooming thing about trade. They are more interested in pleasing nuances from Japanese lawyers around this town on trade than they are on maintaining our competitive situation.

Now you did testify about the 70 percent of the local service market that the Bell operating companies control. I was interested the other day when MCI put out $1 billion and got an additional 1 percent of the long distance market to get them, I think, from 13 to 14 percent. I think U.S. Sprint has about 8 percent. You are talking about the seven Bell companies over here as a big old monopoly with their 70 percent. Now let us talk about AT&T with its 70 percent; both monopolies, I guess, both bottlenecks, only one can manufacture and the other cannot.

You all very happily come to the table and say, whoopee, everything is just tip-top in America. We can manufacture and they cannot and do not let them manufacture.

Now what kind of position is that when all the foreigners can come in here and manufacture? Why do you object to them manufacturing when under the orders and under the Modified Final Judgment, Mr. Tobias, they are asking for only what is allowed you?

You are into big research. If they could manufacture as they said, as they plead for in this particular bill, they would put more into research and everything else of that kind. I do not understand. I do not want to say the lack of shame, but I do not see how you all put this show on.

You can come up here straight faced and you all have it; Both sides have 70 percent. You got long distance, they got local service. But you can manufacture and you can do all of that research and everything else of that kind. They cannot but both of you are struggling in order to compete.

Now I understand competition. You are over, as you are testifying, in Japan and England and everywhere else and the foreigners are all in here taking it over. And you say everything is tip-top and they cannot manufacture and you think that ought to persist and you can?

Mr. TOBIAS. Senator, I think there has been a good deal of debate and discussion and a number of studies done by virtually countless sources, including the Federal Communications Commission, on the whole issue of competitiveness in the interexchange long distance business in this country which, I assume, is what you are referring to with the 70 percent numbers.

The CHAIRMAN. I am not referring to studies, I am referring to the facts of life. Why can you manufacture and they cannot?

Mr. TOBIAS. I would tell you, Senator, that in the markets where I live, if I look at the competitive success of Sprint and MCI and several hundred others, I would suggest that they are doing very, very well. It is a very, very competitive——

The CHAIRMAN. I asked about manufacturing.

Mr. TOBIAS. In manufacturing, in 1981 we had over 90 percent of the equipment business in this country, that is sales to the RBOCs. In 1989 we had 56 percent of that market. That is because competition has entered that market in the strongest and most dramatic terms.

The reason that competition has entered that market has to do with the restructuring of the industry that I have just described. Conversely, 99.999 percent of the calls that go through a local exchange, the access into and out of the local exchange is handled by the local exchange company. Those are dramatic—dramatic differences and, as I think Mr. Zeglis said in his testimony, the only alternative buyer of the equipment that we are talking about for the local exchange companies is the monopoly local exchange company.

So, I think it is inappropriate in my view to compare the market position of AT&T in its businesses with the market position of the local exchange companies in their businesses. That is what the history of this is——

The **Chairman**. I do not understand it. You can make the switches for long distance, but they are not supposed to make them for their business?

Is that not right? I mean, you make all the switches and you buy your own switches? You made it sound like it was horrible over here, buying from yourself. Eyes got that big around and everything else like that. I mean, what the heck.

Mr. **Tobias**. We make the switches. We buy a good deal of what we make——

The **Chairman**. You make and buy from yourself?

Mr. **Tobias**. That is correct.

The **Chairman**. Wonderful, wonderful, that is all we are asking for.

Mr. **Tobias**. And the pressures of the competitive marketplace and the cost structures associated with that are the discipline that would cause us to go right down the tube if we were not getting the very best equipment that is available at competitive prices.

The **Chairman**. Oh, now you and Clendenin are in agreement—you have this sing-song——

You all are back to where you were in the early 1970s, the best equipment at competitive prices, the greatest efficiencies, that sounded like the old hearings we used to have at the FCC.

Well, I wonder about it all because even in manufacturing, I am a little disillusioned. I know I competed years ago with Governor Luther Hodges of North Carolina for Western Electric. I wanted that manufacturing plant. He got it in Durham. I went through Singapore the other day and saw it. It has moved. I won out, I still got my Eastman Kodak.

So you all are moving it around everywhere. I have a stronger concern, because I have the greatest respect for AT&T and particularly the gentleman representing my backyard. They said they were going to lose thousands of jobs. What is there to prevent you from losing thousands of jobs by, let us say, Northern Telecom? They can come in. They are cross-subsidized by Bell Canada. And they have 20,000 employees in North Carolina and Tennessee.

Where is the policy that prevents that?

Mr. **Tobias**. Well, to the degree that it is the policy of the Canadian Government to let that cross-subsidy take place, I am sorry about it because I do not think it is a good idea. But, I can tell you they are very strong and capable competitors here in the United States.

The **Chairman**. We have them right here in the Senate. Northern Telecom provides our phones. We have Northern Telecom right in this place, in this building.

Mr. **Tobias**. And that illustrates my point. The competitive situation with respect to manufacturing that you refer to, Senator, I would like to comment on, if I might. I think there has been some misunderstanding about the numbers of manufacturing jobs in AT&T and where they are.

About 99.6 percent of what we sell in this country to the RBOCs is manufactured in this country. About 90 percent of what we sell in this country in total is manufactured in this country.

The only thing we have moved outside this country is the manufacturing related to cordless telephones, corded telephones and answer and record devices in the consumer electronics part of our business.

And our choices were two. We could either close down those consumer businesses and get out of the businesses and thereby shut off the funding that flows to research and development, eliminate the marketing jobs, the sales jobs, the servicing jobs or we could stay in those businesses, move the manufacturing part overseas, which we did.

Now I am pleased to tell you that, this year, because we have stayed in that business, we will for the first time since divestiture manufacture and sell in this country more consumer telephone sets than we did before divestiture.

Also, the technology is changing the way in which those sets are manufactured. We are beginning to move those manufacturing jobs back into the United States for the sale of products into the United States and I am very encouraged about the trend, there.

The rest of the manufacturing that we do outside the United States, we do as a part of our expansion to sell more globally in other parts of the world. And the research and development that feeds into those activities for global sales helps fund the research and development in Dr. Ross's organization and we are very pleased about that opportunity.

The CHAIRMAN. Do you think an accounting system can be devised that would properly pinpoint or verify any cross-subsidization if it occurred?

Mr. TOBIAS. No, Senator, I do not. And I have lived under those accounting systems for a number of years.

The CHAIRMAN. So you can cross-subsidize your manufacturing activities from your long distance revenues right now because we do not have an accounting system that could verify it?

Mr. TOBIAS. I certainly could if there were not the discipline of the competitive marketplace that exists in the long distance business. It would cause me to go right down the tube if I tried to do that.

So the issue, I think, is if you have to use that as a substitute for real competition and that is the only measure of whether or not cross-subsidy is going on, I think you have a very real problem.

The CHAIRMAN. Thank you, Mr. Chairman.

Senator INOUYE. Thank you. Senator Gorton?

Senator GORTON. Mr. Tobias, maybe you can try to explain to me in a little bit shorter a fashion what I guess the thrust of all of your testimony is. And that is the paradox that you are here speaking in favor of competition. The RBOCs are here in favor of competition.

We have various shibboleths around here, even playing fields, level playing fields, rather, and competition of course which is a very good word.

You probably have the laboring oar on this one because they are not allowed to compete in this particular method with you and with others at the present time.

And they give us the slogan, which is usually a pretty good one, the more the merrier, the more the better. You are telling us that somehow or another competition will be lessened if they are permitted into this business. You can summarize an answer as to why, what seems on the surface of it to be a rather bizarre argument, that less is more, is in fact the correct argument.

Mr. TOBIAS. Senator, I think it goes back to the fundamental difference between the two companies; that is, they are in the local exchange business, which I think by anyone's standards is a monopoly, we are in other businesses, none of which are monopolies.

Therefore, they have the capability, were they in the manufacturing business, to engage in a number of the things that we have talked about and that was discussed in Mr. Clendenin's testimony: The ability to cross-subsidize the manufacturing operations from their monopoly and thereby stifle competition of others who do not have the source of money to use to cross-subsidize those businesses.

There is also the question of the affiliated supplier and the predisposition of a company who is in the manufacturing business, regardless of the circumstances of the relationship, to favor that affiliated supplier at the expense of others who are trying to compete for that business. I think those two issues are the fundamental difference.

Senator GORTON. And you do not believe that there is any way to separate the companies in such a way to prohibit or eliminate cross-subsidization?

Mr. TOBIAS. Senator, I have spent my entire adult career in what was the Bell System and now in AT&T. I participated in a variety of ways, trying to work through those things. I think the issue is not so much wheather there is or is not cross-subsidy. It is that the argument and the debate and the controversy will never go away. And in the kind of monopoly situation we are describing, in some instances, it is virtually impossible to take those cost structures apart and with those two observations, I have reluctantly concluded some time ago that it is just not possible to do it.

Senator GORTON. Senator Hollings, in an attempt to meet one of the objections to simply allowing the RBOCs into manufacturing, has required them to manufacture domestically.

You have gone on and raised another one that, well, that is not effective because they will simply enter into some kind of joint arrangements or partnerships with foreign companies.

Cannot that particular fear of foreign competition be met almost solely and completely just by adding somewhat to the restriction which Senator Hollings already has in his bill?

Mr. TOBIAS. Well, Senator, I do not believe it can. Here is a place where I clearly agree with Mr. Clendenin, In the testimony that he has filed, he has suggested that those constraints are too strong——

And indeed, he says the foreign content provision in this bill ought to be changed so that it represents the average, I believe, if I read it correctly, the average of U.S. manufacturers of like equipment. So, I think both Mr. Clendenin and I would agree that that would be very difficult.

Senator GORTON. Finally, you heard that I asked Mr. Clendenin about changes between 1987 and 1990. His answer, quite appropriately, was that he still did not agree with the 1987 decision. Obviously you did; it was your company which persuaded the court that that was correct.

I take it that you would not disagree with the statement which he made that the world has changed dramatically and mightily since 1987, but that your opposition will exist in 1990 and in 1995 and in the year 2010 for that matter simply because of the fact that the regional Bells are regulated monopolies with respect to their most fundamental businesses.

Would that be a correct summary?

Mr. TOBIAS. Yes, that would be a correct characterization, Senator. I think Mr. Clendenin is absolutely correct when he says, when we get up tomorrow morning the world is going to be different. It is going to be different next week and next month in those areas having to do with the technology in the marketplace of information and telecommunications.

But what is not different is the fundamental underpinning of all that we are talking about here. Nothing has changed with respect to the position that you referred to, that was taken several years ago; the local exchange monopoly bottleneck still exists.

At some point in the future if the monopoly bottleneck ceases to exist, then it becomes a different issue.

Senator GORTON. Then, when Judge Greene dealt with this question in 1987, why did you not object to the RBOCs going into informational services as well as these other fields? Is not the fear of this kind of monopoly as great in anything as it is in manufacturing?

Mr. TOBIAS. Maybe we should have, Senator, but I think our view was and is that the court has the responsibility in its oversight of the decree—and I really ought to let Mr. Zeglis respond perhaps to your question from that point of view—to apply a test as to the competitive aspects of all of this, and therefore we did not feel compelled to take that position.

Mr. ZEGLIS. Mr. Tobias is providing good counsel. The fact is, we were not in information services before or since the divestiture and left that to the other parties who participated in the triennial review, knowing full well they would raise the concerns and the judge would review those.

Senator GORTON. But, nevertheless, your rationale would apply equally there, I take it.

Mr. ZEGLIS. To a great extent, the local exchange is also a bottleneck for the distribution of information content, yes, sir.

Senator GORTON. Thank you, Mr. Chairman.

Senator INOUYE. Thank you. Senator Exon.

Senator EXON. Mr. Chairman, thank you very much.

Mr. Tobias, would Charlie Brown ever have agreed to divestiture if he had thought the Bell subsidiaries would be back in asking for a request to manufacture?

Mr. TOBIAS. Senator, I have known and respected Charlie Brown most of my adult life. In fact, I had the pleasure of spending last weekend with him down at Colonial Williamsburg.

Senator EXON. Did you talk about this?

Mr. TOBIAS. We did not talk about this particular issue.

Senator EXON. I am surprised.

Mr. TOBIAS. But we have on a number of occasions. And I would not presume to answer specifically what Charlie would think today. But I can tell you that at the time he participated in those deliberations and the resulting decisions and made that part of the decision that was his responsibility to make, along with the government, it was his expectation that by making that very painful decision that it would put these decades of controversy behind us and that it would create a circumstance and a structure in the industry that would, for the foreseeable future, separate in this industry those businesses that operate in competitive environments from those businesses that are monopoly environments.

And therefore I guess it would be my expectation that he would be surprised if we were talking about that today.

Senator EXON. I want to follow up on some of the questions that Senator Hollings asked. Do you have a plant in Hong Kong at the present time?

Mr. TOBIAS. Senator, we do not have a plant in Hong Kong. We do have some OEM suppliers in Hong Kong, and we are looking at opportunities to, where the economics make sense, move the production that takes place in Hong Kong and places like that into our own factories, if it involves sale here in the United States.

Senator EXON. Let me press you on that a little bit. You are considering manufacturing facilities in Hong Kong in the future, but at the present time you only have distribution facilities there?

Mr. TOBIAS. No. I am sorry. Let me say that again, Senator.

We have manufacturing facilities in the Far East. Hong Kong does not happen to be a place where we have a factory.

Senator EXON. Where are those?

Mr. TOBIAS. But we have manufacturing in Singapore, for example, and we have manufacturing in Thailand, for example. What I am saying is, at the time we moved that manufacturing to those locations, our choices were to either exit the consumer telephone business in total or find a way to get the labor content and the cost associated with manufacturing down.

In the early 1980s, for example, there were 74 screws that had to be inserted by hand in a Trimline telephone. Today, the technology has changed to the point that there are one or two silicon chips that do the same functions in a telephone. Therefore, the labor component and cost of the labor is a much different factor than it was then.

At the same time, the costs of labor, the comparative costs of labor, around the world have changed. So by having stayed in the business during this period of time we have a business where we have continued to fund R&D, we have continued to have related jobs in other parts of the business, sales, marketing, servicing and so forth. That business has grown and flourished, and we are now looking for ways to move some of those manufacturing jobs, as the economics permit us to do so, back into the United States.

So my point is that we very much regretted having to make the painful decision of either moving those jobs offshore or getting out of the business, but I think we made the right decision. We believe that that business is flourishing and while I cannot make promises to our people that we are going to move those jobs back to the U.S., but we are working very hard on it. We are working with them on that, and I am very encouraged.

Senator EXON. What is the extent of your manufacturing facilities today offshore, the percentage?

Mr. **Tobias**. The percentage, Ian may have in total?

Senator **Exon**. What I would like to know is, are you 75 percent, 80 percent domestic and 10, 20 percent overseas?

Mr. **Tobias**. Let me answer it this way, Senator, and see if this gets at what you are asking about. With respect to what we sell in the United States to the Bell companies, virtually 100 percent—I think it is 99.6 or 99.7 percent—of what we sell to them we manufacture here in the United States. Ninety percent of what we sell to any customer in the United States is manufactured here in the United States.

The exceptions to that are the kinds of things I talked about where our choice was to either move it overseas or get out of the business. That is very limited. The rest of our manufacturing overseas is there because we are trying to do the things that we think are appropriate for this country and for our company to increase the amount of business we are doing worldwide.

And a price of entry in many markets is the creation of manufacturing facilities in those markets, like Taiwan, for example, like Korea, for example. The research and development that supports what is done in those factories comes out of Mr. Ross's laboratories here in the United States.

Senator **Exon**. But the jobs are over there.

Mr. **Tobias**. The manufacturing jobs are over there, but those jobs over there create other jobs that are here in this country. And the alternative would be that if we did not have some of those jobs over there we would not be permitted to enter those markets at all.

Senator **Exon**. Do you have any joint ventures with foreigners?

Mr. **Tobias**. We do. The joint ventures that we have with foreign companies or foreign governments are related to the subject I just was addressing, that is to say, we have a joint venture in Korea with Goldstar-Lucky. We have a joint venture in Italy with Italtel, for example. And in both cases those are joint ventures that were entered by way of giving us the wherewithal to get access to those markets for the sale of AT&T equipment into those markets.

Again, some of the jobs associated with expanding our business in that way are there, but many of those jobs are right back here in the United States.

Senator **Exon**. In your view, to what extent is the current telecommunications trade deficit that was mentioned earlier by Mr. Clendenin the result of the court restrictions on the baby Bells' manufacturing ability?

Mr. **Tobias**. Well, first, Senator, I would like to dispute Mr. Clendenin's numbers a bit. I think he was quoting the 1988 telecommunications trade deficit of $2.6 billion. The Commerce Department number for 1989 is $1.9 billion, which is a 27 percent improvement.

If you back out of those numbers the low end equipment that we have been discussing here, the consumer telephone sets and that kind of thing, then in fact we had a trade surplus. And if you look at only the issue that I think we are really talking about here, which is the high end equipment—switching equipment, the transmission equipment, the high end, high value equipment—this country had a $173 million telecommunications trade surplus in 1988.

And I am pleased to tell you that, related to some of the activities and joint ventures that you and I have just been discussing, that $173 million trade surplus in 1988, according to the Commerce Department numbers, has gone to a $607 million trade surplus in 1989.

Senator EXON. Without revealing any trade secrets, can you tell us about the success that you mentioned earlier on your recent sales trip to Japan? Were these breakthroughs of a magnificent nature, or are you one of these people that pander to the Japanese all the time?

Mr. TOBIAS. I do not think—you would have to ask my friends in Japan about that, Senator, but I surely would not characterize myself that way.

I think the people with whom we are dealing in Japan are very concerned about the whole context of what they see happening on the trade front. This government has been very helpful to us in a number of ways, and I would urge you to keep the pressure on.

Senator EXON. Which government?

Mr. TOBIAS. This one here in the United States, in helping to keep the focus on, and I would say we could use more help. The fact is that I am encouraged about what I see as to some opportunities in Japan. But I think it will be a long struggle.

Senator EXON. I am delighted. I hope you are right. I think you are wrong. This afternoon, just before I came over here, Mr. Chairman, and the reason I was late is that I had some cattle feeders and cattle raisers from Nebraska, a big industry out there, in telling me about how delighted they were about the fact that we are selling more meat to Japan and they think there is a great future in that.

As soon as they left my office, I had a call from a meat processor in Omaha, Nebraska, who said he had laid off half the people in his plant yesterday. He had developed, at long-time expense, the processing of beef, different forms of beef, and had a great distribution system over there, even though they had a 25 percent tariff. The Japanese suppliers were willing to pay that tariff.

On April 1, that tariff went from 25 percent to 75 percent on American processed meats, and the Japanese suppliers were going to have to go to Australia, where the Japanese government was only charging 25 percent tariff. I said, well, how can that be? Well, they said, because we have forced them to take more fresh beef. They want to take it over there and process it and work it there, and so they have played us off, once again, by saying we are going to buy more beef but cut us off on the other end with the processed beef.

I think they outfox you American businessmen all the time. I am glad you seem to think we are making progress. I am delighted with these wonderful pronouncements that come out of the Rose Garden. I think we are getting nowhere fast.

If I were you, I think there's a better chance of you and the baby Bells getting along over the long term than your getting along with the Japanese. But good luck in your effort.

Mr. TOBIAS. Senator, let me just say that my enthusiasm ought to be tempered by the fact that when you've been selling nothing, a little more than nothing is encouragement, and so it is a relative thing. I think it is going to be a long struggle.

Let me also say that there are enormous opportunities of things that AT&T and the Bell companies can do and do do together, and we are looking there for lots of opportunities.

Senator EXON. Thank you. Thank you, Mr. Chairman.

Senator INOUYE. Senator Breaux.

Senator BREAUX. Thank you, Mr. Chairman. I thank the witnesses for their testimony.

Mr. Ross, I was intrigued by what I felt was your argument that the passage of Senator Hollings' bill would somehow make it more difficult for American companies to be manufacturers than the current situation.

You have a plant in Shreveport in Louisiana that each year seems to get smaller and smaller as more and more of those functions are being done not in Louisiana but are being done in Singapore and other places that I do not know about, when you look to the other people in this country now that are doing manufacturing, you look at companies that are Canadian-owned, German-owned, French-owned, Swedish-owned, and so much of your stuff is now certainly leaving my State and going to Singapore, obviously because it is cheaper to do it over there.

Senator Hollings' bill, one of the real features of it, says that if the RBOCs were to be allowed to do manufacturing that the manufacturing, all of it, would be done here in the United States.

Now how can you make the argument that if you have a bill that says manufacturing will be done in the United States, now more and more of the stuff is being done overseas, how is this bill going to be more difficult than the current situation?

Mr. Ross. Well, Senator, Mr. Clendenin testified that it would be poor business sense for his company to attempt to go into what he called the low end product, which is now manufactured overseas, and it is only that low end product that in fact we are manufacturing overseas. So indeed this bill would have no effect on repatriating that consumer electronics industry, including the part of it which was in telecommunications.

Senator BREAUX. Do we just wipe it off, then? Are we just going to agree that all the low end stuff is going to be done by foreign firms? That is what you are saying.

Mr. Ross. No, sir. What I am saying is that I think that the plight of the electronics industry, the repatriation of the consumer electronics industry, is of vital importance to the United States. But when we look at that we have to look at what the root causes are that have caused those things to go overseas and to stay overseas. And they are not the structure of the telecommunications industry.

Senator BREAUX. Suppose you determine that after you helped other people in other countries learn how to manufacture the low end stuff that you are successful in teaching them how to manufacture the high end stuff. And if you can do it overseas cheaper, are you telling us that you are not going to do it overseas also?

Mr. Ross. Well, what I would like to see, Senator, is the level playing field in terms of the environment for manufacturing in this country. Now today the cost of capital that has to be used by manufacturers is, unarguably, higher by about a factor of two in the United States what it is in Asia. Now when you look at processes that require investments over a long period of time in the factories, investments in R&D that only pay off in five to ten years' time, it is very difficult for the United States manufacturers to make the long-term investments that are necessary to support the electronics type industry.

Now my belief is that if we were to bring our capital rate down, so that it is competitive with that overseas—and you know what that implies; it means balancing budgets and savings rates and all of that—you would see the possibility of a major turnaround in this departure of the electronics industry overseas. And I think this is a most important national issue that we ought to get at.

Senator **Breaux**. Back to my question, though, my question is, if you have taught them how to do widgets in Singapore, when you teach them how to do super widgets in Singapore, are you not going to do them in Singapore because you can do it a heck of a lot cheaper there than you can in Shreveport? At least this legislation says that if the RBOCs are allowed to manufacture, all of it would be done in this country, whether it is a widget or whether it is a super widget.

Mr. Ross. I think the days in which you manufacture overseas because of lower labor rates are behind us for two reasons.

Senator **Breaux**. Oh, you are coming back home?

Mr. Ross. We are trying to bring our manufacturing back home, and my fondest hope is that our plant in Singapore will eventually be used to manufacture a product that is only sold in Asia.

But two things are happening which are very important, or one thing is happening that is very important. The labor content in manufacturing is getting lower and lower. I mean, typically in a plant like Shreveport the labor content, direct labor content, used to be 30, 40, 50 percent. In most of AT&T's factories today that labor content is driven below 10 percent and going lower, and that is what you do with the manufacturing technology, which, by the way, is one of the reasons that the employment in Shreveport continues to go down. It is not so much that we are moving product overseas; we are making that factory more competitive by getting down the direct labor costs.

Now, if in addition to getting our labor costs down so that we do not have to chase cheap labor, which by the way is not as cheap as it used to be overseas, if we had our capital costs in better shape in the nation, I think we would have a major step up on repatriating some of these industries.

Senator **Breaux**. Thank you. Thank you, Mr. Chairman.

The **Chairman**. Mr. Ross, I wish it were true. I know from experience in our own State that we have got the best of technical training. We are not worried about high tech Bosch-Nissan automotive electronic engineering. They studied 22 countries and have just started up. We have got others that have come along, Hitachi and otherwise.

But we do have industries leaving to go to Taiwan, Mexico. In McQuilladora, in Mexico, there are almost 2,000 American industries down there now. So yes, wage rates are becoming a little bit more comparable, but the competition is becoming even again more keen.

So that is not the case at all. We are experiencing it as a general outflow still of that electronics, and that is why you are worried about the semiconductors.

Senator INOUYE. If I listened to Mr. Clendenin correctly, he has suggested that the present MFJ undermines U.S. competitiveness by holding up about 60 percent of the available capital assets of the telecommunications industry, assets that could be otherwise used to promote trade, develop new products and services, advanced technology. And they feel that the BOCs have a unique understanding of the telephone network and that they could use this to develop high quality products for use in the United States and in the world.

Do you believe that the MFJ undermines competitiveness in the United States?

Mr. TOBIAS. No, Senator. As I have said, I believe the MFJ promotes competitiveness in the United States. As I read Mr. Clendenin's testimony and listened to it, what I understood him to be saying is that there seem to be a number of firms who have only two possible sources of capital investment.

They can either turn to the Bell holding companies or they can go overseas, the implication being there is no one else in this country from among the community of investment bankers and entrepreneurs and Silicon Valley and venture capitalists, who see the same economic returns in these businesses that could cause them to want to invest in them.

That may well raise some questions about what those companies see in terms of the potential for cross-subsidy and, therefore, the economic incentives that relate to that investment. But for all of the reasons that we have talked about here, Senator, it would certainly be my strongly-held view that the MFJ has promoted competitiveness in this country and to do anything to change these provisions that we have talked about would set us back and take us away from the course of competitiveness in this industry.

Senator INOUYE. Although this has remained unsaid in the testimony here, I think it is correct to assume that one of your reasons in opposing Senator Holling's bill would be that if this measure becomes law it would deny you certain markets and thereby have a negative impact upon your profit margin and your employment picture.

How would it affect you?

Mr. TOBIAS. Well, I think it would likely affect us because of the natural propensity of a firm that had a manufacturer and therefore an affiliated interest in that manufacturer to do business with that manufacturer.

Our expectation is that Mr. Clendenin's company and other important companies who are our very important and large customers will do business with us only if they perceive that we are the best supplier with the best value available to them in the marketplace. And if we introduce circumstances into markets where purchases are being made for other than those reasons, then we are going to set back that competitiveness.

Senator Exon asked me about the numbers of jobs we have in this country. We have 59,000 people employed in the United States in our manufacturing plants, 40,000 in various manufacturing support jobs, and about 30,000 in the related activities that Dr. Ross has, so that is 129,000 manufacturing related jobs in this country.

We have 17,000 manufacturing-related jobs outside the United States, and the vast majority of those are associated with our efforts to manufacture products that enable us to enter markets outside the United States.

Senator INOUYE. Do you have any idea as to how this bill would affect that employment picture?

Mr. TOBIAS. Well, I think it would put it at risk, Senator. I certainly would not have any way to quantify it, but I think the risk certainly is there that a company with an affiliated interest in a manufacturer would have a propensity to do business there rather than with us, for reasons that were not associated with the fundamentals of the products.

Senator INOUYE. And it is your contention that if this measure passes, notwithstanding the fact that you can produce a better product at a cheaper rate, these BOCs would buy from their own companies?

Mr. TOBIAS. Well, Senator, I think the GTE experience perhaps is instructive as a model, because GTE went through a period of time when, by their own statements, they were doing business with their own manufacturing company and thereby buying their own products.

When they concluded that it was no longer feasible for them to sustain leading edge technology, they first constructed a joint venture overseas and subsequently made a decision to exit the business. But during that period of time they still were buying from their own affiliated manufacturer. They had other reasons that caused them to do that. I think that is a very natural and understandable risk, that the RBOCs could do the same.

And it is, therefore, that issue that I am very concerned about.

Senator INOUYE. Under our system of capitalism, do you not think that the owners of the company, the stockholders would not tolerate the type of anticompetitive practice that you suggest BOCs would follow?

Mr. TOBIAS. Well, again, Senator, I think that the issue is not the shareowners' interest here; it is the interest of the customers, because the accusation that would be made, the controversy that would be created, would be one of creating an environment where some would charge that the cross-subsidy was flowing to this affiliated interest at the expense of the ratepayers because the cross-subsidy would cause rates to be higher than they otherwise would need to be in the monopoly part of the business.

So it is not the shareowners that would suffer.

Senator INOUYE. And it is your position that, notwithstanding the techniques of surveillance and accounting, it is still possible, with very little monitoring, to carry out cross-subsidizing and self-dealing?

Mr. TOBIAS. Senator, I would like to be very clear on one issue here. Many of the people who are running these companies are longtime friends of mine. I know them well. They are very, very honorable, honest people of the highest integrity. So the issue is not one of what people would try to do. The problem is that these kinds of schemes are so complex and so difficult and these businesses are so intertwined, and based on the experience that I have personally had for over a decade, I think, try as honorable people will try, it is just not feasible and they will not work.

Senator INOUYE. I thank you very much. Do you have any further questions?

The CHAIRMAN. Well, why does it work for you?

Mr. TOBIAS. Senator, again it works for us because we do not have to deal with those kinds of schemes, because we are dealing in a business, in all of our businesses, that are operating in competitive markets. They are operating against the disciplines of the competitive markets.

I would cite as evidence the very competitive dealings we have had with the U.S. Government as a supplier of products and services. There is great competitive pressure in the markets in which we operate because we do not enjoy a monopoly, and that is the fundamental difference.

The CHAIRMAN. Well, you have got 70 percent of the long distance, and you are buying your own switches, and you are saying that that is not any kind of monopolistic practice or cross-subsidization from your long distance service. But if the Bell operating companies did it, it would find itself including those costs into the local rates. That is your testimony.

Mr. TOBIAS. Senator, my testimony is that if the prices we are paying for what we are getting in the form of the equipment that we put into our network in some way do not permit us to charge the most competitive prices possible to our customers in the long distance business, those customers will leave us and go to one of the several hundred other competitors in the marketplace.

That same discipline does not exist in the monopoly bottleneck local exchange businesses that are at issue here, and that is really the fundamental difference.

The CHAIRMAN. I do not understand the difference. Your long distance rates are approved. Their local rates are approved. It is the same discipline. And then you come in the initial stage saying, look, everything is wonderful. It is very competitive out there. So if they start in seven more competitors, it seems to me logically that would increase the competition. The discipline is the same—the same person regulating your long distance rates and so forth regulates them.

Mr. TOBIAS. Senator, the disciplines that exist in the long distance market today are made up of, yes, the FCC in some ways, and the state public utility commissions. But the real discipline is the force of the competitive marketplace and the options that customers face every day.

And those are the pressures to pull our rates down. That is why in our long distance business, since divestiture, we have decreased our rates something between 40 and 45 percent.

The CHAIRMAN. GTE you cited. You have got Centel, Contel. GTE is as big as BellSouth, is it not?

Mr. TOBIAS. I do not know exactly.

The **Chairman**. They are relatively the same size. Yet they can manufacture and they can get even into information services and into long distance, GTE, and they are in the local telephone business. They are doing it right now.

Mr. **Tobias**. Well, GTE has made a decision, as I said, Senator, to exit the switching business through a joint venture that we have formed with them, for the reasons that we stated.

The **Chairman**. So you have eliminated the GTE competition?

Mr. **Tobias**. No, we did not. But during the time that they were in the manufacturing business they certainly had the characteristics that we are describing here.

The **Chairman**. Your lawyer is frowning.

Mr. **Zeglis**. Smiling, Senator. May the record show I am smiling?

The **Chairman**. Thank you, Mr. Chairman.

Senator **Inouye**. I have presided over many, many hearings and I must say that our witnesses today, Mr. Clendenin and Mr. Tobias and Mr. Ross and Mr. Zeglis, have been first-class. The Chairman just told me that.

The **Chairman**. They really are. We thank you very much.

Senator **Inouye**. Thank you very much.

Mr. **Tobias**. Thank you, Mr. Chairman.

Senator **Inouye**. Our final witness is the Director of the United States Telecommunications Marketing of Digital Equipment Corporation, Mr. Dan Latham. Mr. Latham, welcome, sir.

STATEMENT OF DAN LATHAM, DIRECTOR, TELECOMMUNICATIONS INDUSTRY MARKETING, DIGITAL EQUIPMENT CORP.

Mr. **Latham**. Thank you very much, Mr. Chairman.

Somehow at the late hour I feel like the minister that has prepared a half-hour sermon and the choir has sung three songs three times too many.

The **Chairman**. That is accurate.

Mr. **Latham**. So I will attempt to give an abbreviated testimony and it certainly is part of the record.

Digital Equipment has been in the telephone industry supplying computers for 30 years. We appreciate the honor and the opportunity to participate today.

As the world's leader in supplying network computers and a leader in incorporating computer technology into the telecommunications world, Digital believes that S. 1981 corrects a major flaw in this nation's telecommunications policy—the exclusion of the regional Bell companies in manufacturing.

This exclusion impedes the flow of technology, precludes the normal and essential interactions between manufacturers and their customers. Number three, it injects substantial risks into the design and development process and consequently delays the introduction of efficiency-enhancing and productivity-promoting intelligent network services to the American public.

In light of this, Digital strongly supports the removal of the design and development ban that has been proposed as part of this legislation. At the same time, however, it would be premature to permit the RBOCs to engage in the actual fabrication of telecommunications equipment, and, moreover, Digital is concerned that the bill's requirement that all RBOC manufacturing take place in the U.S. could harm American manufacturers seeking to do business abroad. I will make some abbreviated statements about both of these general areas.

In the first area, fundamentally what Digital is proposing is that we really look at design and the development separately from the fabrication. We believe that design and development is necessary to move the industry forward, to really give us the new services that are required to make this not only a U.S. competitive environment but a global competitive environment.

We believe that we have some examples that I will attempt to iterate where this design problem that we have because of the MFJ has kept us from being successful. As most of you know, it takes somewhere between nine to 18 months, and sometimes longer, to develop the complex systems that are running the telephone networks of today. And what we are attempting to articulate is that in this environment we think that the risks that are there could be minimized by working more closely with the regional Bell companies.

A couple of examples. We have worked with a regional Bell company to deliver an open network architecture gateway that would allow information providers to access more equally the public network. As the MFJ decisions then were released and the court decided the interpretation, this project was cancelled, after nine months of investment with both capital and resources from Digital and the regional Bell company.

Another example was a product that has been announced regarding electronic mail. As a part of this, we announced this product, worked on the product for 18 months in discussions with the RBOC. Had we not completed this product prior to the MFJ discussing its restrictions, they would have never started or embarked on this product, which is now in the marketplace, yielding revenue and reducing the rate base.

The comments that I will conclude with regarding the two other areas—the bill's provisions regarding fabrication of equipment and domestic manufacturing—do raise certain concerns. First, Digital believes it would be premature to permit the RBOCs to engage in the actual fabrication of telecommunications equipment. Unlike RBOC involvement in design and development activities, fabrication authority is not necessary to eliminate existing barriers to the expansion of the network capabilities and enhancement of U.S. competitiveness.

Moreover, fabrication raises significant risks of the discriminatory procurement policies that have been discussed here today. And, as was well documented in the AT&T antitrust litigation, it certainly can cost the ratepayers substantial amounts of money.

Similarly, fabrication by the RBOCs markedly increases the risk that those companies will disclose critical network technical information to their own fabrication subsidiaries before providing the information to competing manufacturers or, if they should allow that information to be shared at all.

Accordingly, although Digital may not oppose allowing the RBOCs to engage in fabrication in the future, it urges Congress to take a more cautious, phased-in approach to granting fabrication authority at this time. In particular, Digital believes it would be valuable to permit the RBOCs, independent manufacturers, and the regulators to gain experience with RBOC design and development as the initial step for five years before authorizing fabrication.

During this waiting period, the FCC could develop and fine-tune the regulations, which do not currently exist, to ensure against discriminatory procurement, and the Commission could test such regulations out in practice, perhaps by authorizing limited waivers of the fabrication ban.

Digital submits that this more cautious approach achieves the bill's policy goals while more carefully balancing the interests of independent manufacturers and ratepayers.

Second, Digital is concerned by the bill's requirement that all manufacturing activities take place within the United States. As the Subcommittee is well aware, technology industries are now global, both in their competition for markets as well as their structure and their manufacturing operations. Although Digital and its peers among American technology producers add significant value, especially research and engineering investments that we have in our products here in the United States, we manufacture our products all around the globe.

Without addressing the complexities of the current requirements regarding domestic content and particular interested parties of policy, let me just suggest that American companies are struggling to maintain and grow competitive posture around the world. As we do so, the imposition of domestic manufacturing restrictions on good sold in the United States invites the European Community or Japan to impose similar restrictions for our products in addition to those we already face as we seek equal access to their markets.

Accordingly, Digital urges the Subcommittee to consider whether the domestic manufacturing requirements would in fact deleteriously affect U.S. trade interests.

Let me conclude and open up for questions. I would like to reiterate Digital's appreciation for being invited. I think it is important to get a different perspective, the computer perspective, on this testimony, its strong support for the goals of S. 1981 and its willingness to continue working with the Subcommittee in order to fashion legislation that permits the RBOCs to design and develop telecommunications equipment under conditions that promote full and fair competition.

And if it was now time for the offering, I would collect it. Thank you.

[The statement follows:]

TESTIMONY OF DIGITAL EQUIPMENT CORPORATION REGARDING S.1981

Digital Equipment Corporation ("DIGITAL") is pleased to submit this testimony regarding S.1981, the "Telecommunications Equipment Research and Manufacturing Competition Act of 1989." As a world leader in developing networked computer systems and integrating computing technology into telecommunications networks, DIGITAL strongly supports the bill's initiative to permit the Regional Bell Operating companies ("RBOCs") to engage in design and development of telecommunications equipment. Removing the current ban on RBOC design and development activities would remedy a fundamental flaw in this Nation's telecommunications policy, promote widespread access to intelligent network capabilities, and enhance the competitiveness of U.S. industries in the global marketplace.

At the same time, however, DIGITAL is concerned that it would be premature to permit the RBOCs immediately to engage in actual fabrication of telecommunications equipment, given the increased risks of discriminatory procurement. In addition, DIGITAL respectfully submits that requiring the RBOCs to conduct all manufacturing activities within the United States may make it difficult for American manufacturers to establish or increase their presence in the global telecommunications marketplace.

1. Permitting the RBOCs to Design and Develop Telecommunications Equipment Would Remove Existing Barriers to Implementation of Intelligent Network Capabilities and Would Enhance U.S. Competitiveness

Section 2 of S.1981 states that "[t]he Congress finds that the continued economic growth and the international competitiveness of American industry would be assisted by permitting the Bell Telephone Companies to conduct research on, design [and] develop ... telecommunications equipment for American residential and business telecommunications users." DIGITAL wholeheartedly endorses this finding.

DIGITAL has long believed that RBOC involvement in the design and development of telecommunications equipment is necessary to promote the rapid and efficient implementation of intelligent network capabilities. These capabilities, in turn, should bring valuable new network-based information services to all Americans and significantly enhance the productivity and competitiveness of U.S. industry. Today, however, the RBOCs are precluded from engaging in design and development activities by the MFJ court's 1987 Manufacturing Order, which contains an exceptionally broad interpretation of the manufacturing restriction -- an interpretation that impedes the flow of technology, hinders normal and essential communications between manufacturers and their customers, injects massive uncertainty into the development process, and frustrates efforts to bring America fully into the Information Age.

a. The Development of An Advanced Telecommunications Network Will Require Close Inter-Industry Cooperation

As DIGITAL explains below, the convergence of the telecommunications and computer industries means that development of an advanced network infrastructure and the services that will use that infrastructure, will necessitate close cooperation between network service providers, computer companies, switch manufacturers, and users. The regulatory structure in the U.S., unfortunately, has not recognized this convergence and does not currently permit such cooperation.

(1) There Has Been a Fundamental Convergence of Computers and Communications

Traditionally, the telephone industry and the computer industry were viewed as discrete entities, with the telephone network using analog, voice-optimized technology and computers using a digital, data-optimized technology.[1] In the past twenty years, however, the line separating computers and communications has been inexorably erased:

- Network transmission is moving from an analog, narrow bandwidth "voice" environment to a digital, broadband "data" capability which obscures the internal/external distinction. Not only has the network moved to digital media (fiber optics,

---

[1] For many years, such a distinction was not entirely inapt, as special modems, connections, and line conditioning were required in order to employ the existing network for nascent Information Age computer-based applications.

e.g.), but the nature of transmission services has also changed.[2]

- Network switching also has evolved from analog to digital. New central office switches essentially function as large computers with enormous computing potential.[3]
- As intelligent networks incorporate sophisticated data processing and information services previously only used on an external basis by CPE and enhanced service providers, the integration of computer technology is carried several steps further.
- Local and wide-area voice and data networks, computers, PBXs and application software now perform many functions previously only available as part of the public network.[4]

In short, it has already become very difficult to differentiate between network and "external" functions, and it will be increasingly difficult to do so in the future. Network customers with more demanding requirements, such as LAN users, will demand increased digitization, higher throughput, and timely deployment of more responsive services

---

[2] In particular, the development of advanced packet-switching and protocol processing has permitted enhanced functions to be integrated into network transmission, where before they were only available though value-added services.

[3] These "stored program control" switches ("SPC") operate under the direction of a central processing unit which can interact with a variety of databases and routing processors to efficiently allow the provision of a host of features through the public network.

[4] PBXs in particular have developed a great deal since the early 1970's. Current PBXs have begun to employ SPC technology, modular architectures and distributed processing to allow a wide range of features, including voice/data integration; code, speed, and protocol conversions; least cost routing; station message detail recording; distinctive ringing; calling number identification; access blocking for long distance lines; voice messaging; and traffic aggregation and compaction.

-- all resulting in further integration. Moreover, as new server-based and computer technologies are increasingly incorporated into the network, new services made possible by these developments will even further defy antiquated categorizations.

(2) The Melding of Computing and Communications Technology Requires Interdisciplinary Cooperation

As a result of the increased interdependence between telecommunications and computers, telephone companies, computer companies, and switch manufacturers will have to work together to develop the highly complex hardware/software systems that will drive the intelligent networks of the future. These intricate products require such intensive research and development efforts that it is becoming increasingly unlikely that any one company would have sufficient expertise or resources to develop them. Moreover, the financial risks associated with such undertakings comprise a significant initial hurdle for both telecommunications and computer companies. Finally, given the substantial cost of developing new services, the flexibility of intelligent network architectures, and the increasing complexity of users' demands, individual users must also play a significant role in defining new services and capabilities. Unfortunately, the current regulatory structure in the U.S. does not facilitate this type of interactive development.

b. The Current Interpretation of the Manufacturing Ban of the MFJ is a Substantial Barrier to Necessary Cooperation in the Design of Advanced Network Products

The greatest impediment to cooperation is Judge Greene's 1987 Manufacturing Order, which interpreted the MFJ's manufacturing restriction very broadly.[5] Specifically, in the Manufacturing Order, Judge Greene held that the BOCs may not engage in the design and development of telecommunications equipment, CPE, or software that is integral to such equipment. The BOCs may, however, determine generic requirements for equipment used in the network, and may design the network itself. Indeed, the Judge stated that "the performance of such [network design activities] is a far cry from the design of specific products -- a process that takes place after generic specifications for the network have been defined and disseminated."

The description of the manufacturing process used by the court was virtually identical to a conceptual model outlined by AT&T, and the line between permitted and prohibited activities is drawn precisely where AT&T had argued that is should be drawn. Briefly stated, AT&T's conceptualization of the manufacturing process, and the one adopted by the court, has seven stages: basic research, applied research, generic definition, detailed requirements specification, design, development, and replication. Under this model, each phase of the process generates results that can be articulated and are sufficient to support the next independent phase of operations.

---

[5] United States v. Western Electric Co., Inc., 673 F.Supp. 525 (D.D.C. 1987), aff'd C.A. No. 88-5050 slip op. (D.C.Cir. Feb. 2, 1990).

As applied to complex systems, however, this interpretation rests on several profoundly mistaken assumptions:

- First, it assumes that the manufacturing process is in fact linear and composed of discrete stages which do not overlap to any significant extent. While this may be true for the development of relatively simple products, DIGITAL has found that when it comes to the manufacture of complex telecommunications products, the process cannot be so easily segmented. Indeed, for these products, the various stages described by AT&T often overlap and may even merge into a single activity.

- Second, it assumes that a clear line can be drawn between "design of the network" and "design of equipment used in the network." When a company such as DIGITAL "manufactures" sophisticated hardware/software systems, however, the development of generic standards necessarily merges into the formulation of detailed product specifications. These systems are inherently complex and must be carefully customized for a given purchaser. Accordingly, the very same steps that must be taken to develop useful generic requirements will also result in detailed specifications for the product.[6]

- Third, it assumes that a clear line can be drawn between specification of "generic requirements" for network products and of the "actual design" of those products. However, the public telephone network is rapidly evolving into an intelligent network in which complex computing systems play an integral role. As a consequence, telecommunica-

---

[6] Indeed, the components of the system (hardware and software), and the methods of linking those components together, are simply so intricate that typical DIGITAL customers have neither the expertise nor the resources to specify, in any detail, standards that could be used to independently design and develop an appropriate computing system.

> **tions service providers realize that it has become increasingly difficult to design the network without simultaneously designing the hardware and software systems to be used in the network.**

Contrary to these assumptions, the development of sophisticated hardware and software systems for use in an intelligent network architecture is a non-linear process that relies on close cooperation and interaction between computer manufacturers, switch vendors, and telephone companies. For example, when DIGITAL is approached by domestic independent telephone companies or foreign PTTs to develop network products, the result is usually an extended relationship that allows both companies to merge their respective expertise in design of the product.

Because the companies normally arrive with only the most general requirements, DIGITAL spends a great deal of time, often restarting from scratch, to develop a high-level architecture for the proposed product. Once a high-level architecture is developed to the company's satisfaction, DIGITAL typically produces a more in-depth system design, which involves detailing hardware and software requirements and conducting feasibility studies to ascertain the optimal solution for solving the identified problem. The next stage in the process involves building a "proof of concept," which incorporates the best system from the previous feasibility tests and shows the customer exactly what it would see in terms of hardware and software if the final system actually were produced. Upon review of the proof of concept, the customer sometimes concludes that the system is not what it was looking for, which will necessitate starting anew. It is only when the proof of concept has been approved that DIGITAL is able to formulate product requirements for the system and actually design the product.

In a typical case, between 9 and 18 months elapse between the initial contact between DIGITAL and the customer and formulation of firm product requirements. Even if DIGITAL has prior experience with the design of the system type at issue, it will have already expended considerable amounts of money. Those sums may have quadrupled, moreover, if DIGITAL has been required to venture into new design areas for the client. It is thus apparent why DIGITAL prefers to work closely with the customer at all stages of design and development -- it allows DIGITAL to avoid costly trial-and-error mistakes, conserves time, effort and money, increases efficiency, and produces a customized system that provides the best possible service to the client.

In contrast, DIGITAL and other manufacturers are precluded under the current interpretation of the manufacturing clause from engaging in a similar interactive dialogue with their BOC clients. Regardless of the sophistication of the system to be created, DIGITAL must undertake this crucial phase without access to the particular areas of expertise that the BOCs possess and consequently must design and develop high-level architectural designs, feasibility studies and proofs of concept without input from the BOCs.

Given the substantial investment that is required for such development activities, the broad interpretation of the consent decree creates intolerable inefficiencies. Deprived of essential customer input, manufacturers must redesign equipment several times before they can adequately meet an RBOC's needs. In addition, because of the risk and expense involved in developing complex network products, smaller manufacturers are reluctant to work with RBOC customers, thus removing an important source of innovation.

Quite apart from the inefficiencies inherent in Judge Greene's interpretation, the uncertain applicability of the ruling is also having counterproductive effects. From its own experience, DIGITAL can offer two examples of how such uncertainty has impacted the market. In the first of these examples, DIGITAL worked with an RBOC to develop a public electronic mail system prior to release of the Manufacturing Order. In that case, DIGITAL's off-the-shelf product matched 90 percent of the RBOC's requirements, but some degree of customization was still necessary. Although this product will be announced shortly, DIGITAL was subsequently informed that the project would never have been initiated after the court's decision.

In the other instance, DIGITAL was asked by another RBOC to assist in designing and developing a ONA gateway. This gateway would have provided easy, fast, and efficient access to network basic service elements for information service providers by integrating certain network functionalities with computer networking techniques. After eight months of development work by several DIGITAL engineers, Judge Greene's manufacturing order was issued and soon thereafter DIGITAL was informed by the RBOC that it was terminating the project because of the court's decision. The result was that both DIGITAL and the RBOC expended several man-years of non-recoverable engineering resources and a promising new service was never brought to market.

Whether or not these activities were actually in violation of the decree is immaterial. The fact is that the broad ban on design and development has created confusion and caution because of the fear that projects *might* be in violation of the decree. Given the already substantial risks involved in such design activity, as well as the substantial resources that must be irrevocably committed to the process, additional uncertainties are a factor the market cannot bear.

At bottom, the ban on design and development delays or precludes the implementation of intelligent network architectures that can support advanced information services. The ban, as currently interpreted, creates substantial inefficiencies in design of products; deters the entry, and consequent innovations, of small developers; and generates uncertainties in the marketplace. Accordingly, retaining the current interpretation of the restriction risks undermining the competitiveness of information-dependent industries and depriving consumers of efficient access to Information Age capabilities. For these reasons, S.1981 represents sound, and vitally necessary, public policy.

2. Notwithstanding its General Support for S.1981, DIGITAL Believes the Bill Raises Two Serious Concerns.

As discussed above, DIGITAL strongly endorses the bill's authorization of RBOC design and development of telecommunications equipment. At the same time, however, DIGITAL believes that two aspects of the bill raise serious concerns.

First, it would be premature to permit the RBOCs to engage in fabrication of telecommunications equipment. Unlike RBOC involvement in design and development activities, fabrication authority is not necessary to eliminate existing barriers to expansion of network capabilities and enhancement of U.S. competitiveness. Moreover, fabrication raises significant risks of discriminatory procurement (a practice that was well documented in the litigation giving rise to the consent decree), which impedes competition and can cost ratepayers substantial amounts of money. Similarly, fabrication by the RBOCs markedly increases the risk that those companies will disclose critical network technical information to their own fabrication subsidiaries before providing the information to competing manufacturers.

Accordingly, although DIGITAL may not oppose allowing the RBOCs to engage in fabrication in the future, it urges Congress to take a more cautious, phased-in approach to granting fabrication authority at this time. In particular, DIGITAL believes it would be valuable to permit the RBOCS and independent manufacturers to gain experience with RBOC design and development activities for five years before authorizing fabrication. During this waiting period, the FCC could develop and fine-tune regulations, which do not exist today, to ensure against discriminatory procurement. In addition, the Commission could test such regulations out in practice, perhaps by authorizing limited waivers of the fabrication ban. DIGITAL submits that this more cautious approach achieves the bill's policy goals while more carefully balancing the interests of independent manufacturers and ratepayers.

DIGITAL's second concern with the bill pertains to the requirement that all RBOC manufacturing activities take place within the United States.[7] As the Subcommittee is well aware, technology industries are now global both in their competition for markets and in the structure of their manufacturing operations. Although DIGITAL and its peers among American technology producers add the lion's share of value -- especially research and engineering investment in our products -- here in the United States, we manufacture our products all around the globe. Without addressing the complexities of current U.S. "domestic content" requirements -- such as the government's "Buy America" policies -- DIGITAL suggests that American companies are struggling to maintain a competitive posture around the world. Against this background, the imposition of domestic manufacturing restrictions on goods sold in the United States invites the European Community or Japan to impose similar restrictions for our products -- in addition to those we already face -- as we seek equal access to their markets. Accordingly, DIGITAL urges the Subcommittee to consider whether the domestic manufacturing requirement would in fact deleteriously affect U.S. trade interests.

---

[7] *See* proposed Section 225(b)(3).

3. Conclusion

By permitting the RBOCs to engage in the design and development of telecommunications equipment, S.1981 would remedy a serious flaw in this Nation's existing telecommunications policy, promote expansion of the capabilities of the RBOCs' networks, and enhance U.S. competitiveness. DIGITAL respectfully recommends, however, that the bill be amended to withhold authority for the RBOCs to engage in fabrication for five years following its effective date. Similarly, the provision requiring all manufacturing activities to take place within the United States should be deleted.

DIGITAL reiterates its appreciation for being afforded the opportunity to submit testimony. In addition, DIGITAL hereby expresses its willingness to work with the Subcommittee as it continues to consider legislation to permit the RBOCs to engage in design and development of telecommunications equipment under conditions that promote full and fair competition.

Senator Inouye. Thank you. Senator Hollings.

The Chairman. We do appreciate very much your appearance and your testimony. I am trying to get a full grasp of it. It is a given. Let's say, all right, the BOCs go forward with the research and with the development you have described. I do not understand and I want you to clarify even further the issue with respect to fabrication. And then I want to get into this overseas effect.

The BOCs are putting monies all over the world now that could be used to take advantage of the foreign ratepayers. Whereas in this country I know my telephone rates are is going to be reviewed by a public body and I know good and well I am not going to pay the highest price for the worst equipment. The inducement of the manufacturers as a result is what now has been characterized as the discipline of the marketplace. The inducement would be to even get its equipment cheaper, to even get it more efficient, to even get it more responsive to my particular Bell operating company.

It seems the logic is otherwise. Elaborate a little bit more where you think it will hurt to fabricate. You do not want to go that far, you say. Tell me once again why not.

Mr. Latham. I think the network is extremely complex. Start with the network itself. There fundamentally are three elements. One is the transmission medium. Number two is the switches. And number three are the computers that help design and manage that network.

When we look at the position that we are in regarding the MFJ, we really cannot share information. It forces us to try to build to some idea of what the network is going to need, and allows us to go through trial and error and try to deliver something.

The inability to communicate and share information in a normal customer-supplier relationship that is really balanced around the world and is impeded here has really showed down things like the intelligent network. If we are able to share information and if we are able to share research and design, we will be able to make this network in the United States much more competitive just basically because of our sharing. Right now we are not able to do that.

The manufacturing of the equipment is almost a real third partner, third step of that. The sharing of the network, the building of the software, and adding the services to the network are really where the competitiveness is going to be gained.

The Chairman. Well, is there not a very competitive market out there already, as you indicated? And adding nine more into the competitive market would even then again add some more competition.

Mr. Latham. Basically my premise is that the manufacturing piece of this marketplace is extremely competitive, as you said. The real key is to share the information to build the global competitive products that can be marketed around the world. Adding of the manufacturing does not necessarily give us any real competitiveness.

Over the next five years, we believe that we can build the safeguards in so that there really is none of the jeopardies that were mentioned by AT&T and build the safeguards in to support a growing network and be competitive at the same time.

The CHAIRMAN. The provision that would require the manufacturing to be within the country does not really change any market, does it? I mean, it is all being bought here now, from what they are saying—all the switches, 99-point-something percent of the RBOCs are buying from AT&T, and the other equipment.

I do not see why there would be the reaction you speak of in the international global competition because the others really have the same domestic content provisions galore, and in fact we are going to have to sober up. The EEC is not orchestrating and organizing at the moment for a free market; they are girding for the trade war and to be able to compete and give and take and make it to the economic interest, let us say, of the Pacific Rim and of the United States. And that is the way it should be.

This nonsense about we are going to start in the fourth quarter, it is a very great dynamic situation out there. The government is an integral part of it, only ours is working against us and all of their governments are working for them. So when I look now at what the competition is going to be and what the requirements are with respect to all commodities and everything else like that, you cannot sell anything. The gentleman from AT&T is lucky he got in and out of Japan, because they would not let in NTT, or whatever it is, the largest corporation in the world.

They are not about to let AT&T start up business over there. They want their expertise, their expert advice and counsel there. They are not about to buy a telephone or a switch. We are having a hard enough time with all the other particular products over there and what have you.

But, anyway, we do appreciate it, Mr. Chairman. Thank you very much.

Senator INOUYE. Mr. Latham, I am really intrigued by your proposal. If I may, may I ask Mr. Clendenin and Mr. Tobias if you are prepared to give your response to this, or would you like to submit a statement?

Mr. CLENDENIN. Mr. Chairman, we would be happy to do that. I am not prepared to do that. As I suspect you can understand, I have been concentrating on other parts of the hearing, but I would be delighted to respond for the record.

Senator INOUYE. Will you study Mr. Latham's statement and give us your reaction to it?

Mr. TOBIAS. I would be very happy to.

Senator INOUYE. Mr. Clendenin, would you do the same thing, too?

We would be happy to do the same thing.

Mr. CLENDENIN. I would parenthetically like to say, though, that the distinction that he started off with is of critical importance. It was the heart of the first two-thirds of my testimony, and that is the understanding of this totally artificial barrier which the court's current definition of manufacturing has placed in what should be an orderly process. We are not allowed to work with or exchange information with or do anything of the normal process of design of equipment that we are indeed going to be using.

That is a critical piece of his testimony that I would just, without any delay, say ought to be substantially agreed to. And it is curious, because Dr. Ross himself has made a number of speeches where he has talked about the total integration of the design process as being critical to the efficient building of the network, and that is what we are talking about.

I applaud DEC's position, saying that the RBOCs at a very minimum right now should be allowed into the manufacturing process, at least to that extent. We will give some consideration to the balance of his testimony and give you our response.

Mr. TOBIAS. Mr. Chairman, I would just say we believe much of what is being discussed here is indeed permissible under the terms of the decree today, and with your permission we will submit for the record a more specific response to that.

Senator INOUYE. Since it should be obvious to one and all today that we did not call this hearing just for the sake of filling up time, we anticipate some action on this measure. That has been the policy of this subcommittee.

That being the case and because of the complexity of this problem, may I ask Mr. Tobias and Mr. Clendenin to study each other's testimony and give us your reactions thereto?

Mr. TOBIAS. Yes, Mr. Chairman, we would be happy to do that.

Senator INOUYE. With that, I would like to thank all of the witnesses. You have been extremely helpful. I am certain that your testimony will bear a lot upon what we decide to do in future days.

With that, this hearing will be adjourned until May 9.

[Whereupon, at 4:42 p.m., the subcommittee adjourned.]

TELECOMMUNICATIONS EQUIPMENT RESEARCH AND MANUFACTURING COMPETITION ACT OF 1989

WEDNESDAY, MAY 9, 1990

U.S. Senate,
Committee on Commerce, Science, and Transportation,
Subcommittee on Communications,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:35 a.m. in room SR-253, Russell Senate Office Building, Hon. Ernest F. Hollings (Chairman of the committee) presiding.

OPENING STATEMENT BY THE CHAIRMAN

The Chairman. The committee will come to order.

Good morning. I am pleased to be here once again to consider S. 1981, my bill to lift the manufacturing restriction on the Bell operating companies. At our first hearing 2 weeks ago we heard some very persuasive testimony, to my mind, from the President and CEO of Bellsouth, Mr. John Clendenin. He made it clear that the manufacturing restriction is jeopardizing this country's world lead in telecommunications technology. I could not agree more. Unless we can put to use the tremendous assets held by these Bell companies, America's telecommunications industry is likely to go the way of our consumer electronics industry—overseas.

We also heard 2 weeks ago from AT&T, which is opposed to any change in the current situation. AT&T presented an interesting story of the potential for the Bell companies to abuse their monopoly. But the times have changed. The market for telecommunications equipment is a global one, and we are losing our competitive advantage. These foreign competitors may well be cross-subsidizing and self-dealing. And of course we need to prevent these abuses as much as we can. But we cannot let our concerns about these problems tie up our industry so that we cannot compete at all. It is a new game, and we need to be in it.

I was interested to hear from Digital Equipment Corporation last week. Digital's position that the Bell companies should be allowed to design and develop equipment but not to fabricate it for at least 5 years strikes me as an interesting effort to deal with the problems we are facing today.

Fortunately, we have a number of witnesses here today who will help us to develop a greater understanding of the problems and issues we are facing today. I am particularly interested in hearing from the Federal Communications Commission concerning its ability to enforce the safeguards that are contained in S. 1981. This matter affects a number of interested parties, and I am pleased that we will have the opportunity this morning to hear from them.

In my view, there is no more important issue for Congress to be working on than lifting this manufacturing restriction. Congress is not in control, the foreigners are. We cannot allow this situation to continue any longer. I look forward to the testimony this morning and to moving forward on legislation in the near future.

We are very pleased this morning to have as our first witness the Chairman of our Federal Communications Commission accompanied by counsel, Mr. Firestone.

Do you have an opening statement?

Senator PACKWOOD. No, thank you, Mr. Chairman.

THE CHAIRMAN. Do you, Conrad?

OPENING STATEMENT BY SENATOR BURNS

Senator BURNS. I have an opening statement.

The CHAIRMAN. Go right ahead, sir.

Senator BURNS. Thank you, Mr. Chairman. I will just give you a brief report as we go into these important hearings.

Thank you, Mr. Chairman. I think these hearings are very important as we move down this road of trying to develop some kind of communications policy that is consistent with our economic stability in this country.

As you know, last month I hosted a three-day telecommunications conference in Helena, Montana just on Information Age technologies and economic development. I am planning a second one in Billings coming up in October.

As far as I am concerned, the two, technology and economic development, go hand in hand. For my state to prosper, for rural America to survive, and for America to remain competitive in a global economy, the long talked-about promised telecommunications technology and the Information Age is going to have to be realized.

As part of my conference, a number of telecommunications companies were invited to display their wares, and we saw some pretty exciting developments: two-way interactive video and audio distance learning; rural medical applications such as high definition medical imaging; and emergency systems, just to name a few.

It has become clear to me in the short time that I have been a member of this body and a member of this Communications Subcommittee that there is one thing missing, a comprehensive coherent set of national communications policies to accommodate and spur this communications and Information Age revolution.

So I am sort of issuing a challenge to my colleagues not on this committee but in the Senate and in the government that we need to fashion a bipartisan comprehensive national communications policy agenda for the 1990s and on into the 21st Century.

As a first step to develop such a scheme, at the Commerce Committee markup on the cable bill I will offer some telco entry and safeguards amendments that will provide a long-term competitive solution to the so-called cable problem, and it will result in extraordinary benefits to the American telephone and cable TV customers by substantially increasing the speed at which telephone and cable telecommunications can modernize their infrastructure through the installation of fiber optic transmission systems.

Specifically, I will offer an amendment package of strict regulatory safeguards that addresses all the legitimate concerns which have been raised by the various parties in that telco debate. It is a middle ground approach, I think.

The issue being debated at today's hearing, the MFJ reform, is another piece of the overall communications policy agenda which must be addressed, and I heartily congratulate our Chairman for realizing that we have to start down this road. I fully support the overriding goal of Senator Hollings' bill, S. 1981, which is to increase manufacturing in the United States. We need the jobs, to be very honest with you. More importantly, we need to remain in the forefront of the telecommunications technological revolution that I mentioned earlier.

I am convinced that to achieve that goal will require close collaberation between the telephone companies and the manufacturers. A good idea in the laboratory does not always translate into a product that capture the public's imagination and fancy. As a result, it's important that researchers, manufacturers and sales all work together.

I am also concerned that as we make policy that stimulates manufacturing, we insure the competitiveness of American firms that take advantage of that policy. That means these companies will have to have access to the parts and materials essential to the manufacturing process. We ought not to overburden these companies by restricting where they go for materials—not if we expect them to compete in a global economy.

Thank you, again, Mr. Chairman.

I look forward to the testimony of our distinguished witnesses—in particular, my good friend, FCC Chairman Al Sikes.

Mr. Chairman, I applaud you, and as we go down this road I know there are many things that I can learn and hope to learn from these hearings. I congratulate you.

The CHAIRMAN. Very, very good. We appreciate it.

I have a statement that Senator Pressler would like to have included in the record.

[The statement follows:]

OPENING STATEMENT BY SENATOR PRESSLER

Mr. Chairman, I am pleased that we will have the opportunity to hear today from a number of additional witnesses their views on S. 1981, the Telecommunications Equipment Research and Manufacturing Competition Act of 1989. How we regulate the activities of America's telephone companies is extremely important to the economic vitality of American busines in general.

Since the breakup of Ma Bell, this country has seen an explosion of new products and services in the telecommunications field. Does this mean that the current regulatory structure is working fine? Does it mean that we can now relax the retrictions on the Bell Operating Companies? Or does it indicate that we ought to relax these restrictions in order to take advantage of the opportunity to solidify a dominate world position for America in telecommunications?

My primary concern in this area is that the consumer, particularly the consumer in rural and small town America, continues to receive the full range and the best quality of telephone service available anywhere. I also want him to receive this service at an affordable price. Several of today's witnesses should be able to answer the question of how this legislation will affect that service.

With that I will close my remarks, Mr. Chairman. I look forward to hearing from this morning's witnesses.

The CHAIRMAN. Chairman Sikes, we welcome you this morning. We will include your statement in its entirelty in the record, and you can deliver it or highlight it as you wish.

STATEMENT OF HON. ALFRED C. SIKES, CHAIRMAN, FEDERAL COMMUNICATIONS COMMISSION; ACCOMPANIED BY RICHARD FIRESTONE, CHIEF, COMMON CARRIER BUREAU

Mr. SIKES. Thank you very much, Mr. Chairman. I appreciate the opportunity to support the bill, S. 1981, which you and other Senators have sponsored.

If enacted, S. 1981 would change restrictions on domestic manufacturing placed on Bell companies under the 1982 AT&T consent decree. They would thus have the same option to manufacture that other regulated firms such as AT&T, GTE, Pacific Telecom, and ALLTEL enjoy.

Let me stress at the outset my strong opinion that regulatory safeguards will be adequate to protect ratepayers and competitors. To begin with, today's environment is dramatically different than 1982. Just this morning, Mr. Chairman, an associate of mine read in a history of the United States economy how back in the 1970s the unified Bell system was richer than Sweden. Well, seven significantly smaller regional phone companies functioning in an international market is something very different from when one monolithic Bell System dominated what was essentially a national market.

Effective regulation is easier today because we have clearer benchmarks. The global communications equipment market affords us a ready benchmark, for example, to evaluate prices that Bell companies pay.

In addition, new regulatory tools have been implemented. These include open network architecture where we now require phone companies to unbundle network services. They must also disclose technical information so competitors' equipment can be interoperable.

We have improved cost accounting and auditing programs. Do we have strong cost accounting and affiliate transaction rules as do a number of our State regulatory partners. We use sophisticated computer programs to scrutinize company reports. Our Automated Reporting and Management Information System, ARMIS for short, lets us target audit and enforcement resources.

In addition, many private entities regularly scrutinize Bell company operations and provide information regarding potential problems. Last December, moreover, Congress passed and President Bush signed legislation accomplishing a 50-fold increase in FCC fine authority. We can impose fines of $1 million, and I think this Commission's record demonstrates that we will impose stiff sanctions where warranted.

We also have embarked on a new program of cooperating with our partner State commissions. Last month the FCC convened the first ever State-Federal regulatory summit. We agreed, among other things, to share information, and we believe this will magnify our overall effectiveness.

Earlier this year, moreover, the FCC announced price caps for local exchange carriers to take effect in January 1991. Price caps eliminate potential rate base padding or predatory pricing. Costs cannot be recovered automatically from captive ratepayers.

Finally, Mr. Chairman, S. 1981 will have no effect on potential antitrust exposure of Bell companies. That exposure will remain in place.

Deterrence, Mr. Chairman, as the five Members of this Committee who are former judges or prosecutors certainly know, is the product of several factors. The cumulative effect of the factors that I have enumerated produces a very strong deterrent.

Among the potential benefits of S. 1981 is, first, the important question of future research. The decree's ban on manufacturing extends well beyond fabrication to encompass product-related research. Consequently, potential benefits of synergy too often may be lost.

Bell companies are funding research through their equipment purchases. To the extent their procurement is captured by non-U.S. companies, however, the effect of the current restrictions is to fuel research for foreign-based firms.

There is also reason to believe restrictions on Bell company manufacturing have facilitated foreign purchase of U.S. high technology firms. At the very least it has kept the Bell companies—sources of significant venture capital funds—on the sidelines. Between 1984 and 1989, foreign-based corporations acquired many U.S. high technology firms. In just 1988 and 1989, Japanese high technology communications and computer acquisitions in the United States reportedly exceeded $12 billion.

The effects of removing the current court-devised manufacturing restrictions vary with the category of equipment at issue. In the case of customer premises products, for instance, any risk of anticompetitive developments is small, but the potential gains are limited as well.

This particular market is already competitive. The Bell companies are already in many of the relevant activities, and letting them do more, while I think it is a good idea, is not going to have a major impact at least in the short run.

In the case of core network products, however, both the competitive and international trade circumstances differ. I do believe that there are significant opportunities, for example, in the software area. In my full statement, Mr. Chairman, I discuss this matter more fully.

The principal risk that critics of this proposal have surfaced is that Bell companies might use the ability to make core network equipment to pad their rate bases. Let me just say, however, that under the price caps approach that the FCC has proposed and a number of states have already adopted, any excessive prices paid by a phone company to its manufacturing affiliate would just reduce the phone company's profits, not increase its service prices. This is because under price caps there is no automatic cost passthrough allowed anymore.

In addition, there are other possible workable safeguards. For example, precluding procurement of core network equipment from an affiliate for a period of years would eliminate potential abuses. Public policy should facilitate, not discourage, the ability of Bell companies to contribute. We should seek to capitalize on the benefits of synergy and further the goal of network modernization.

While I support this bill, certain provisions are a matter of concern. The bill, first, would place on the Bell companies an indigenous manufacturing obligation. This would place a burden on Bell companies not placed on others.

In respect to the bill's separate subsidiary provisions, I would have no objection to a requirement of financial separateness, but I do not believe there should be such separateness that potential cross-pollination and other benefits are lost. In aggregate, Bell companies constitute more than half the financial and human resources comprising the U.S. telecommunications industry, and at a time when our technological and commercial leadership is being strongly contested.

Public policy should seek to mobilize, not constrain, all of our national assets. We believe FCC and State regulatory safeguards are adequate to protect ratepayers and the Bell companies' potential competitors.

Mr. Chairman, that concludes my statement. I have with me this morning the Chief of the Common Carrier Bureau, Mr. Richard Firestone, who is specifically responsible for many of the safeguard programs that I have spelled out. So I certainly look forward to answering questions of this committee, and Mr. Firestone is prepared as well.

Thank you.

[The statement and questions and answers follow:]

STATEMENT OF HON. ALFRED C. SIKES, CHAIRMAN, FCC

Mr. Chairman and Members of the Subcommittee:

Thank you for this opportunity to testify in support of the communications manufacturing bill Senators Hollings, Stevens, and Lott are co-sponsoring.

Introduction

If enacted, S. 1981 would change restrictions on domestic communications equipment manufacturing -- and related research and development activities -- placed on the Bell telephone companies pursuant to the 1982 AT&T consent decree. These firms would thus have much the same option to engage (or invest) in equipment manufacturing and associated research that other regulated telecommunications companies -- such as AT&T, GTE, Pacific Telecom, and ALLTEL -- now enjoy, though subject to certain statutory and regulatory conditions.

While I do not necessarily endorse all features of this proposed legislation, Mr. Chairman, I support its fundamental purpose -- to reinforce American communications manufacturing and competitiveness -- and I commend the bill's sponsors for having initiated what I consider a positive first step.

Three Major Issues

As we see it, Mr. Chairman, this bill presents three major issues for Congress and the Federal Communications Commission (FCC) to consider. These are:

- First, whether the FCC -- together with the Nation's 51 other public regulatory agencies -- now commands the ability and resolve to safeguard against possible ratepayer and competitive abuses, if consent decree manufacturing limits change;

- Second, whether we agree with the bill's co-sponsors and believe changes in these limits are desirable or needed; and,

- Third, whether there are refinements to this measure which we think would improve its effectiveness.

Adequacy of Regulatory Safeguards

Let me stress, at the outset, my strong opinion that existing, pending, and proposed FCC and State regulatory safeguards will be adequate to safeguard the interests of telephone ratepayers and potential Bell company manufacturing competitors.

This is particularly true given the additional budget resources which the FCC has sought. As you know, Mr. Chairman, effective common carrier regulation and enforcement constitute a high FCC priority. We believe the additional financial, personnel, computer, and other resources which we will devote to these efforts will ensure our regulation and enforcement are as effective as possible.

New Communications Environment

Let me briefly review why I am confident in the adequacy of regulatory safeguards.

To begin with, Mr. Chairman, I trust everyone here will agree today's communications markets and regulatory environment are much different from circumstances in 1982, when most limits on domestic Bell company manufacturing were adopted.

Back then, a unified, monolithic, vertically integrated Bell System controlled over three-quarters of the country's telephone service and equipment markets. There was little competition from domestic or foreign-based equipment suppliers. Since virtually all core network and other equipment transactions occurred under the same corporate umbrella, moreover, there were few open market benchmarks against which regulators could measure the reasonableness of prices Bell operating companies were paying.

But this is not true today. The unified Bell System, of course, has been broken into eight separate companies. One result has been to remove a principal obstacle to effective regulation which prevailed in the past -- namely, the sheer magnitude of the former company.

All Bell companies rank among our largest corporations. Nevertheless, it is considerably easier for Federal and State regulators to police their activities today than when they confronted what was then the world's largest corporation.

Seven regional companies functioning in what has become an international market is something very different from earlier days when there was one Bell System dominating what was essentially a national market. The advent of a world market for communications equipment, in sum, has benefited customers and significantly reduced potential monopolistic abuses.

Availability of Benchmarks

Effective regulation is easier today because we have much clearer benchmarks and yardsticks. An aggressively competitive, global communications equipment market, for instance, affords us a ready measure to evaluate prices Bell companies pay.

Switching systems, for example, currently sell in the world equipment market for between $175 and $250 per line, depending on the particular feature package. Terminal equipment prices are determined by an even more diverse and competitive world market. Consequently, regulators can and do compare the prices, as well as the ultimate performance of one telephone company against another.

As I indicated earlier, Mr. Chairman, several American communications companies currently have manufacturing affiliates. Our largest local exchange carrier, GTE Corp., as well as our largest long-distance carrier, AT&T, engage in manufacturing. ALLTEL and Pacific Telecom -- which is a subsidiary of PacifiCorp. (formerly Pacific Power and Utah Power & Gas) -- together have controlling interests in one of the few remaining U.S.-based residential telephone equipment makers, Comdial Corp. We have seen no evidence these telephone companies' manufacturing interests have caused ratepayer or competitor abuses.

New Regulatory Tools

In addition, a broad array of new regulatory tools has been implemented since 1982 when the AT&T consent decree was entered. These tools include, most notably --

- Open Network Architecture. We now have extensive rules and regulations which oblige phone companies to "unbundle" their network services. They must also disclose technical information, thus allowing competitors' equipment to be interoperable with those networks. These rules provide competitors full and fair access to essential communications facilities. They render it hard for phone companies successfully to leverage any monopoly position in local plant to limit competition in other fields.

- Improved Cost-Accounting and Auditing. We also have exceedingly thorough cost-accounting and affiliate transaction rules for local telephone companies, as do virtually all of our State regulatory partners. While our own auditing staff is limited, associated with these rules are stringent independent auditing and reporting requirements.

Obviously, no cost-accounting regime is perfect. As testimony before the Subcommittee April 25, 1990, indicated, however, both the FCC and the New York Public Service Commission have initiated proceedings involving NYNEX Corp. and one of its subsidiaries.

Since that is a pending matter, I will not review its details. Let me say, however, that I think our record in this as well as other instances demonstrates firm resolve to investigate alleged abuses and vigorously enforce our rules.

- Computer-Aided Regulation. Today, we use sophisticated computer programs to scrutinize phone company reports. Our "Automated Regulatory Management Information System" -- ARMIS for short -- lets us target audit and enforcement resources more effectively. We are now sharing this data with State regulatory agencies as well.

- More Private "Policemen." In addition, there are today a large number of actual and potential Bell company rivals, not to mention a number of major customer associations. These entities can and do regularly scrutinize Bell company operations, and provide both FCC and state regulators with information regarding potential problems.

Many provisions of title II of the Communications Act reflect an assumption, as Mr. Justice Brandeis phrased it, that "sunshine is the best disinfectant." Statutory provisions require information to be spread across the public record, and assume this mandated disclosure will facilitate private "enforcement" activities. I think experience shows these private "policemen" can be highly effective.

- Greater Fines. Last December, moreover, President Bush signed into law legislation approved by this Subcommittee which accomplished up to a 50-fold increase in the fines and administrative penalties the FCC can impose. We now have authority to levy aggregated fines of $1 million for individual violations of our rules.

I think this Commission's record demonstrates we will not hesitate to impose stiff sanctions where warranted. Let me assure the Subcommittee, in short, that my FCC colleagues and I have the resolve fully to use all tools at our disposal to safeguard the public interest.

- State-Federal Cooperation. We also have embarked on a comprehensive program of cooperating fully with our partners on State regulatory commissions. Last month, the FCC convened the first-ever State-Federal "Regulatory Summit." Chairmen, Commissioners, and officials from the FCC, 38 States, the District of Columbia, Puerto Rico, and the National Governors Association attended.

We focused on a many common regulatory goals and objectives. We also agreed at that meeting to undertake more systematic sharing of regulatory and other information. This should have the positive consequence of magnifying the overall effectiveness of our regulatory and enforcement efforts.

- Price Caps. Earlier this year, moreover, the FCC announced it would implement "price caps" for local exchange carriers in January 1991. Under this system, carrier price increases will be limited, essentially, to the annual inflation rate, less a predetermined productivity factor.

Price caps will terminate the tradition of permitting phone companies automatically to recover virtually all costs through their rates. While the FCC price caps system will apply only to the interstate services which local companies sell -- typically access services to long-distance carriers -- a number of States, including several of the largest, have also proposed or implemented local incentive regulation regimes.

Price caps afford a highly workable and efficient tool to eliminate potential rate base "padding" or predatory pricing. This is because costs incurred in either hypothetical cannot be recovered automatically from captive ratepayers. The ability of price cap-regulated telephone companies to cross-subsidize competitive ventures from monopoly rates, in sum, is for all intents and purposes, eliminated.

- Antitrust Exposure. Finally, Mr. Chairman, we should bear in mind that, while S. 1981 would change limitations imposed under the 1982 AT&T consent decree, it would have no effect on the potential antitrust exposure of Bell companies in connection with any equipment manufacturing they undertake.

S. 1981 would not affect section 313 of the Communications Act (47 USC Sec. 313), which explicitly applies Federal antitrust laws to trade in radio communications equipment, such as transmission systems. Nor would the bill affect possible application of section 10 of the 1914 Clayton Anti-Trust Act (15 USC Sec. 20), which requires competitive bidding when a common carrier purchases from a company with which it shares officers or directors (and which has been applied even when the companies have common ownership).

More importantly, all Federal and State antitrust laws governing monopolization and attempted monopolization would continue to apply -- laws which courts have repeatedly ruled apply to telephone company equipment provision and manufacturing.

Significant Deterrent

Deterrence, Mr. Chairman -- as the five members of this Committee who are former judges or prosecutors certainly know-- is the product of several factors. These include the ease of detection, the probability of complaints, the certainty of apprehension, the likelihood of enforcement proceedings, and the severity of the sanctions ultimately applied.

I submit, Mr. Chairman, that when the cumulative effect of all the regulatory tools and other factors I have enumerated is considered, it is reasonable to assume there is a very strong deterrent in place and working here. I believe, therefore, that the Subcommittee can be confident there are indeed adequate Federal and state regulatory and other safeguards against potential ratepayer and competitor abuses, should Bell companies be permitted to engage in domestic manufacturing.

Potential Benefits of S. 1981

The potential benefits flowing from enactment of S. 1981 should be assessed from several perspectives. There is, first, the important question of future basic and applied research and development.

As currently construed by the district court, the prohibition on "manufacturing" in the AT&T consent decree extends well beyond fabrication to encompass product-related research and similar activities. In theory, Bell companies (and their wholly-owned affiliate, Bell Communications Research Corp. (Bellcore)) may fund and engage in basic research. The line of demarcation between "basic" and "applied" research, however, almost always is unclear, and the risks of transgression are severe.

Consequently, potential benefits of synergy too often may be compromised or lost altogether. Those with expertise regarding network operation are constrained in their ability to work with those knowledgeable about equipment design and performance. In the end, both parties, as well as the public, are the losers.

The National Telecommunications and Information Administration (NTIA) in 1987 and again in 1989 undertook to assess the research activities and outlays of Bell companies. In each instance, they found those outlays are among the lowest of any group of major U.S. corporations, measured on a per employee or percentage of sales basis. Indeed, one NTIA staff review concluded the research activities of Bell companies were less intensive than those of regulated electric utilities firms which generally function in a lower technology environment.

The inability of Bell companies to capitalize on the results of research, by incorporating them in products they license or manufacture, coupled with the uncertainties inherent in trying to differentiate between categories of research, help explain these low expenditures. Through their purchase of equipment from unaffiliated companies, Bell companies are indirectly funding some telecommunications research to be sure. To the extent an increasing percentage of their procurement of both core network and customer-premises equipment is today being captured by non-U.S. companies, however, the practical effect of the current restrictions is to fuel research by foreign-based firms.

The current restrictions also essentially bar Bell companies from serving as a source of venture capital needed by smaller, innovative, U.S. firms. This Subcommittee, as well as the House Telecommunications and Finance Subcommittee, have received testimony about a number of such companies. There are examples in which small, entrepreneurial, American companies have turned instead to foreign capital sources. Such capital support is often conditioned, moreover, upon a requirement the research undertaken and, indeed, any ensuing product manufacturing, be performed in part in the supporting firm's home country.

Technology, as the late Commerce Secretary Malcolm Baldrige often commented, traditionally was America's competitive edge. Yet the predictable, if certainly not intended, consequence of the current AT&T consent decree manufacturing limitations has been to restrict the flow of U.S. dollars into U.S. communications research at precisely that juncture when it should have been accelerated.

Facilitating Foreign Acquisitions

Relatedly, there is reason to believe the current restrictions on Bell company manufacturing have facilitated foreign acquisitions of U.S. high-technology firms. Shortly after the Bell System breakup, for example, ITT Corp., then the world's second largest communications equipment manufacturer, undertook to sell its manufacturing operations, both in the United States and overseas. The two largest U.S. communications companies -- AT&T and GTE -- then had a substantial presence of their own in manufacturing, and their acquisition of the ITT properties apparently raised antitrust issues. Ultimately, those properties -- for which Bell companies could not lawfully bid -- were bought by a French Government-controlled corporation.

Subsequently, GTE Corp. undertook to sell its domestic and international private branch exchange (PBX) and transmission equipment manufacturing operations. Those properties -- for which Bell companies, again, could not bid -- were acquired by

Japan and West Germany-based multinationals. Similarly, when General Dynamics sought to sell its Stromberg-Carlson subsidiary, Bell companies again could not bid and that leading supplier of switches to smaller telephone companies was acquired by British interests.

Between 1984 and 1989, foreign-based corporations acquired a large number of U.S. high-technology firms. In just 1988 and 1989, the value of Japanese high-technology communications and computer acquisitions in the United States alone reportedly exceeded $12 billion. Ironically, Bell companies were allowed to reinvest their profits in overseas markets and, indeed, were permitted by the judgment court to engage in offshore manufacturing, provided no significant part of the output was exported to the United States.

None of the Bell companies evidently have invested significantly in offshore manufacturing. Permitting such overseas manufacturing investment, however, while forbidding domestic operations, would tend to ensure that, when manufacturing limits might be removed, production almost certainly would take place overseas!

Varying Effects

The effects of removing the current court-devised and administered manufacturing restrictions will vary with product category as well as from a short-run vs. long-term perspective.

Communications products can be broadly categorized into two classes: core network products and customer-premises equipment. Both the character of those respective markets, and their regulatory implications, differ greatly.

Demand for and supply of telephone switching apparatus, for example, tends to be concentrated, with relatively few major customers accounting for most of the output of relatively few major suppliers. The cost of such products, moreover, ordinarily constitutes a significant part of a telephone company's rate base investment.

In contrast, demand and supply of customer-premises products -- telephone handsets, for example -- is much less concentrated, with a large number of buyers and sellers. For nearly a decade, moreover, customer-premises equipment has been "deregulated," and with some minor exceptions does not constitute allowable rate base investment.

The competitive and other implications of Bell company manufacturing of customer-premises products are limited. This is because those firms already are permitted to engage in virtually all relevant stages of production, short of product-related research and actual fabrication. They may, and in most but not all instances currently do, distribute, retail, install, and maintain customer-premises equipment in what, by all measures, is an intensely competitive market.

Being allowed to engage in four of six interrelated stages of production, any Bell company's ability to exert "market power" almost certainly will not be enhanced by affording them the additional option to "bend the metal." As an economist might explain it to a layperson, it is not necessary to control every castle on the Rhine to police the traffic; one or two will suffice. The fact Bell companies' permissible presence in most facets of the customer-premises market has had no discernible adverse competitive (or other) effects provides strong support for the conclusion enactment of S. 1981 will have little negative effect on this particular market segment.

In the case of core network products, circumstances differ. The likelihood of de novo, independent entry into central office switch manufacturing by a Bell company, for example, is by all reasonable estimations, small (although a Bell company might acquire an existing switch producer). More likely, a Bell company would enter this highly specialized, "big ticket" market in joint venture with one or more of the current switch suppliers. Although the United States has several such suppliers, including AT&T, Northern Telecom Inc., and DSC Corp., others are foreign-based.

Conceivably, a Bell company could bargain preferential access to its internal switch requirements market in return for part of its joint venture partner's overall business. At the same time, such a "requirements contract" arrangement could foreclose that Bell company's demand to other suppliers.

Given the extraordinary research intensiveness of the switch manufacturing business, any such preclusive arrangements carry high commercial risks. While individually large, no single Bell company today accounts for more than 6 percent of the world switch market -- too small a share by itself to facilitate cost-effective amortization of high research costs. Unless a single switch supplier reached the same or comparable agreements with a number of Bell companies, the supplier would still be obliged to compete in the unaffiliated marketplace.

If the prices charged in that market were significantly at variance with the prevailing world price for switching apparatus, while those charged its partner Bell company were abnormally high, that differential almost certainly would be detected, by regulators or competitors. Under the price caps regulatory regime which the FCC and many State regulatory commissions likely would have in place, moreover, excessive prices paid for equipment secured from an affiliate or production partner would simply serve to reduce profits, not to increase service prices. In addition, there are other workable safeguards. For example, precluding procurement of core network equipment from an affiliated firm for a period of years would essentially eliminate any potential for abuses.

If the risks associated with Bell company manufacturing, realistically viewed, are small, so too, at least, are short-run public policy rewards. Permitting Bell companies to manufacture, as I have previously testified before the House Telecommunications and Finance Subcommittee, is not a "quick fix" to current U.S. communications equipment trade deficits.

In the longer run, however, such manufacturing could yield national dividends. The employees of the Bell companies represent a valuable resource, and the source, potentially, of innovation and new ideas. Deeply involved in providing service to customers, Bell company workers presumably are well-positioned to understand and anticipate customers' communications wants and needs, and to see new ways of meeting those needs.

Public policy should facilitate, not discourage, the ability of Bell companies and their workers to make a contribution to subscribers' welfare. We should, in short, seek to capitalize on the benefits of synergy and, by so doing, also further the goal of network modernization.

Reservations Regarding S. 1981

While I support the general thrust of this proposed legislation, certain provisions are a matter of some concern.

Proposed section 225(b)(3), for example, would place on the Bell companies an obligation not now placed on other U.S. communications equipment manufacturer, namely, to conduct of manufacturing and associated activities -- including manufacture of components -- within the United States.

Such an indigenous manufacturing requirement could place cost burdens on potential Bell company manufacturers. At present, AT&T, for example, manufactures none of the customer-premises products it markets to residential customers in the United States, presumably because it has found it difficult to produce such products at competitive prices. The requirement that all components be made domestically, moreover, would present a special challenge, as domestic sources of certain microelectronics are few, if not nonexistent.

Additionally, the requirement in the draft bill that all equipment manufacturing operations be undertaken by an "arm's length" subsidiary (proposed sec. 225(b)(6)), and that the Commission issue the pertinent implementing regulations, is a matter of concern.

The issue here is not necessarily whether there will be separate subsidiaries, but rather the terms and conditions governing their relations. In almost all instances, manufacturing and service operations are segregated by corporate management in separate units, divisions, or even corporations. In no case that we know of, however, are such rigid restrictions placed on intracorporate relations.

Thus, for example, neither AT&T nor GTE's telephone service and manufacturing operations are so restricted. While Northern Telecom, Inc. is separated from its Canadian parent, Northern Telecom, Ltd., which is, in turn, separated from its majority shareholder, Bell Canada, there are no U.S. restrictions on corporate relations. In most cases, close collaboration between equipment manufacturing and research operations, moreover, has been beneficial, not detrimental, in terms of furthering new products and innovation.

While I appreciate the concerns which gave rise to the current bill restrictions, I am concerned they could mandate treating Bell companies differently from the firms with which they would compete in manufacturing. I am also concerned such restrictions might curtail beneficial synergies and thus limit the public interest gains this bill seeks.

I would have no objection, of course, to a requirement of financial separateness. But I do not believe there should be such separateness that potential "cross-pollenization" and other benefits are lost.

Conclusion

In aggregate, Bell companies today constitute more than half the financial and human resources comprising the U.S. telecommunications industry. At a time when our technological and commercial leadership in this key high-technology sector is being strongly contested both at home and abroad, public policy should seek to mobilize, not constrain, all our national assets.

We believe existing, pending, and proposed FCC and State regulatory safeguards are adequate to protect ratepayers and the Bell companies' potential competitors. The largest local exchange carrier, GTE Corp., currently engages in communications equipment manufacturing as, of course, does the largest U.S. long-distance company, AT&T. Virtually all of the other local and long-distance carriers in the United States except the Bell companies enjoy comparable commercial freedom.

We do not support the domestic manufacturing or "arm's length" subsidiary requirements envisioned by S. 1981. We do, however, endorse the fundamental thrust of this commendable legislative initiative, and stand ready to assist the Subcommittee as it reviews this bill.

Responses Of
FCC Chairman Alfred Sikes
To Questions Of
Senator John Kerry
Regarding S. 1981
"The Telecommunications Equipment Research And Manufacturing Competition Act of 1989"

Question 1: **What is the status of the Commission's enforcement action against NYNEX, and when does the Commission anticipate issuing a final order in the proceeding?**

Answer: Every effort is being made to issue a final order in this proceeding as soon as possible. The NYNEX Telephone Companies have submitted a comprehensive written response to the Commission's Order to Show Cause and Notice of Apparent Liability for Forfeitures (Order to Show Cause). Commission personnel currently are engaged in a thorough review of that response, which involves extensive research into the numerous legal and factual issues raised by the companies.

Question 2: **What were the reasons for the Commission's clarification of the accounting rules involved in the NYNEX case?**

Answer: The NYNEX case involves the application of existing policies and rules of general application to a specific factual situation. The Commission initiated this proceeding based on a staff audit of transactions between NYNEX Materiel Enterprises Co. (MECO) and the NYNEX Telephone Companies. That audit revealed an apparent violation of FCC accounting rules governing how those transactions must be recorded on a carrier's regulated books. In the Order to Show Cause, the Commission described the requirements of these accounting rules and stated its tentative conclusion as to how these rules applied to the NYNEX purchasing arrangement. NYNEX disagrees with the Commission's conclusions. We will carefully consider NYNEX's arguments before issuing a final order.

Question 3: **Does the Commission believe that its currently effective accounting rules against cross-subsidization and self-dealing are strong enough to prevent such activity if the line of business restrictions on manufacturing were lifted?**

Answer: The Commission's nonstructural safeguards, including our accounting rules, effectively protect ratepayers and competitors against any tendency of rate-of-return regulated companies to try to shift nonregulated costs to ratepayers. The NYNEX case demonstrates that these safeguards can be, and are being, effectively administered and enforced. Moreover, it is reasonable to assume that a very strong deterrent against Communications Act and antitrust violations exists and is working effectively when one considers the entire telecommunications regulatory structure and marketplace environment.

Marketplace conditions and the regulatory environment today are much different than when the consent decree was entered in 1982. Seven RBOCs functioning in what has become a competitive international market is something very different from the days when a unified, monolithic, vertically integrated Bell System dominated what was essentially a national market. The relatively smaller size of each RBOC, and the existence of a global communications equipment market, establish clearer benchmarks for use in policing carrier activities and more private "policemen" to assist Federal and state enforcement activities. The broad array of programs developed since 1982 - including Open Network Architecture, Price Caps, and strict cost accounting procedures - has greatly strengthened our ability to ensure compliance with the Act. Deterrence also has been enhanced by stronger State-Federal cooperation, and by Congress' decision to implement up to a 50-fold increase in the fines and administrative penalties the FCC can impose. Moreover, these beneficial changes represent an addition to Federal and State antitrust laws, and nothing in S.1981 would limit the potential antitrust exposure of Bell companies in connection with any equipment manufacturing they undertake.

Against this background, I believe that existing, pending, ~~and~~ proposed FCC and State regulatory structures will effectively safeguard the interests of telephone ratepayers and potential Bell company manufacturing competitors in the event the MFJ manufacturing ban is eliminated.

The CHAIRMAN. Well, thank you. I think your testimony goes to the heart of the misgivings that those who oppose the bill have; that is, that we get back into what we experienced back in the 1960s and 1970's. There were some predatory practices by AT&T causing, of course, the Modified Final Judgment.

Specifically, you now, for example, regarding long distance service AT&T's pricing is controled by the Federal Communications Commission. Is that correct?

Mr. SIKES. It is certainly in part, and in part it is controlled by the dynamics in what is a very competitive long distance marketplace.

The CHAIRMAN. Right, but no one has complained about AT&T manufacturing.

Mr. SIKES. That is correct.

The CHAIRMAN. Do they buy their own equipment?

Mr. SIKES. Yes, sir.

The CHAIRMAN. Can you imagine such a thing?

You mean to say AT&T opposes this bill because the Bell companies might buy their own equipment and AT&T is now buying its own equipment?

Mr. SIKES. Yes, sir.

The CHAIRMAN. Chairman Sikes, the whole environment of regulation, I take it as you say in this statement in full, has changed, whereby you have all kinds of safeguards. You have not just one monolith, AT&T, but you have the seven Bell operating companies. You have competition already, of course, out there now. You have substantial domestic as well as foreign competition. You have the price cap approach. You have the new system, as I take it, of accounting whereby you are able to enforce any restriction against cross-subsidization.

I think that is the real part of it. Section 3 of my bill says that a Bell Company shall not subsidize its fully separated subsidiary with revenues from its regulated telecommunications services. The opposition testifies to what we have prescribed in the bill itself, as if we cannot read that. I begin to wonder whether it could be worded more strongly, and I cannot say how.

Can you?

Mr. SIKES. No.

The CHAIRMAN. Do you see any gap in the line with respect to the ability to enforce?

Mr. SIKES. No, sir.

The CHAIRMAN. Thank you very much.

Senator Packwood.

Senator PACKWOOD. No questions, Mr. Chairman.

The CHAIRMAN. Senator Gorton.

Senator GORTON. I will pass, Mr. Chairman.

The CHAIRMAN. Senator Breaux.

Senator BREAUX. I do not want to break the trend here, but just one question, if it is all right with my Chairman.

Mr. Sikes, I apologize for not being here for your presentation. I am aware of what you have said, and I have read the summaries of it.

One of the problems seems to be the ability of the FCC to try and establish some sort of a procedure, if the RBOCs are allowed to get into manufacturing, which would protect the consumer interest, and everybody really, against any monopolistic practices of cutting other people out of the business. And there is a big argument as to whether that can be devised or not. Apparently it wasn't working very well back in the seventies, I guess, when AT&T and Western Electric were manufacturing and buying a lot of their own products, and that was one of the reason for the whole breakup.

What makes you think that now we have a system that could be put into place which would, in fact, provide that type of protection?

Mr. **Sikes**. Well, first, things are dramatically different than they were in the 1970s. It was pretty hard, I would guess, to get your arms around AT&T which I, in my opening statement, indicated was richer than the country of Sweden in 1973.

Secondly, we were in a national market, not an international market, and so it was hard to compare equipment prices. Thirdly, AT&T was a monolith for all intents and purposes, so you did not have the benchmark opportunities. We can now compare Bell Atlantic and Southwestern Bell to U S West to BellSouth or whichever companies, and we have our Automated Reporting Management Information System, and we get expenditure data and we compare it year to year and quarter to quarter and company to company and equipment category to equipment category. And then we use that to help us target what are fairly slender audit resources.

But those slender audit resources have been supplemented by what we call attestation or independent audits, and we believe that recent actions show that the ARMIS system does help identify the difficulties that you are concerned about, that we do have the wherewithal to follow up on what is targeted, and that we do have the resolve as a Commission, when we find abuses, to stiffly sanction the abusers.

Senator **Breaux**. Can you find out about cross-subsidization problems and do something about them if, in fact, they would occur?

Mr. **Sikes**. Yes, we can. The affiliate transaction rules basically preclude underwriting certain of the costs of the same manufacturing affiliate through the regulated operating company, or ballooning the revenue of the affiliate by overpaying for what the affiliate manufactures or sells.

Senator **Breaux**. Thank you, Mr. Chairman.

The **Chairman**. Senator Bentsen.

Senator **Bentsen**. I have no questions, Mr. Chairman.

The **Chairman**. Mr. Chairman, we have our Chairman here, and he momentarily has to go down to the White House. We welcome you. Do you want to take over?

Senator **Inouye**. No, thank you. This is the Hollings bill.

This is the Hollings bill, and I have come to this stage in my career because I know when I am up against a chairman.

The **Chairman**. Not at all. I am up against being the devil's advocate here. You have got Mr. Firestone. Let us hear from him. You see what the idea is. The consumer group says uh-oh, here we go again. They are going back in, and they going to subsidize and literally quash all these little private operations that we have nurtured now as a result of the disintegration you might call it of the monolith, AT&T, into the seven companies and what have you. From a common carrier, regulator and chief of that division, you would be alarmed perhaps and really concerned and have the primary responsibility to make darn sure that the common carrier, namely the consumers, were not subsidizing the manufacturing business. I do not want to be paying my telephone bill for them to be in some manufacturing venture, and that is really what everybody is concerned about, and that is what has been held up, no doubt, by Judge Greene. What is your comment? How is it working over there or do you have any amendments to it or do you think it is good or bad or what?

Mr. FIRESTONE. As the Chairman indicated, a series of rules and regulations have been put in place in recent years specifically with the idea of policing the boundary between what would be a regulated activity and what might be unregulated activity, such as manufacturing, specifically to prevent the kind of cross-subsidies or abuses that you made reference to.

We have built an audit staff and have accounting rules, again, directed at policing that boundary. In addition, as the Chairman made reference, the price cap plan that we have proposed to have in effect by January of 1991—covering all of the Bell operating companies as well as some of the other large telephone companies—would remove the traditional incentive to cross-subsidize.

The view of rate of return regulation is that it has been a cost-plus system. If you could shift costs from a manufacturing subsidiary, for example, into the regulated telephone company, you could recover those costs through the increased rates you would get under a rate of return system.

Under price caps, however, your prices are determined by formula. That does not rise by your padding your investment or your rate base and, therefore, there is no incentive, no ability to recover that kind of cross-subsidy from ratepayers.

And so we think there are effective rules in place. We think we have the resources and will to enforce them. And, as I indicated with price caps coming on line soon, the incentives in the market will change dramatically, also, to provide increased protection.

The CHAIRMAN. Well, Chairman Sikes allowed that there have been about $12 billion in purchases of high-technology equipment firms by the Japanese in 1990 and 1989. What oversight, if any, did the Federal Communications Commission have of those acquisitions? Did you have any involvement at all, Chairman Sikes?

Mr. SIKES. We had no involvement at all.

The CHAIRMAN. You just read it in the "Wall Street Journal?"

Mr. SIKES. That is correct. I think the Committee would be interested—and we will provide a copy for the record; I got a copy faxed to me, and I do not have a copy for the record today—but there is something called the "Japan M&A Reporter" or "Merger and Acquisition Reporter." It reported that in 1989 the top industry preference by the Japanese for acquisitions of U.S. industries was computers and telecommunications, and that they bought 26 companies during 1989.

Further, it reports on page 5 that the Japanese companies did not hesitate to do large transactions, but maintain their interest in small deals to meet strategic objectives. Three statistics highlight this trend. About 41 percent of all deals per annum, including investments, were under $20 million in size. The average value in acquisition was $170 million, but the median was only $18 million.

And, I think one of the witnesses later will testify—lest we single out Japan—about a European acquisition that, again, a Bell company was interested in but was precluded from completing by the modified final judgment provision against manufacturing.

The CHAIRMAN. Well, there it is. I think I am in charge, and I have at least convinced Senator Inouye. I have not convinced the Japanese, and you are not in charge. You think you are Chairman of the Federal Communications Commission in America, but you had nothing to do with all that you just read.

Mr. SIKES. And, I would add additionally that if you do not think I am doing a good job, you will not hesitate, I know, to call me up here. And I would doubt that Judge Greene has ever been up here.

The CHAIRMAN. Now you are back to Senator Inouye. He is in charge.

Well, let's take Northern Telecom, our Canadian friends. We have a free trade agreement. Now, you look. You have got 20,000 Northern Telecom employees in my sister state of North Carolina. They are subsidized by Bell Canada, is that not right?

Mr. SIKES. I am not sure, but they clearly have a relationship.

The CHAIRMAN. They definitely have a relationship. Do you think if it continues that I ought to take, say, Bell South and move them from Atlanta to Ottawa so that they can operate in the same fashion?

Mr. SIKES. I just do not know the specifics of Bell Canada's acquisitions, but I would guess that it is largely Northern Telecom equipment.

The CHAIRMAN. Very definitely. Excuse me, Senator Pressler. Do you have any questions?

Senator PRESSLER. I would like to ask would you say that it is fair to say that the range of telephone services and products available to the consumer has ballooned since the breakup of AT&T? Would that be a fair statement?

Mr. SIKES. Yes.

Senator PRESSLER. Now, how do you respond to those who say if it ain't broke, do not fix it?

Mr. SIKES. Well, first, I would say that that is not totally a result of the breakup of AT&T. Secondly, I would say there are certain things "broke" when foreign companies can fund high technology ventures more readily than can domestic companies.

We also, by allowing AT&T its monolithic status for so many years forced, for example, companies such as GTE and ITT, which were also equipment manufacturers, offshore. They ended up in this decade or the last decade selling out to the Germans and to the French because they did not have a substantial market share in this country. So I think that what we probably lack, at least in some respects, is the diversification in telecommunications manufacturing that would be helpful.

Now, I do not mean that we do not have other good companies besides AT&T, but we really do not have, I think, the extent of diversification that would be healthy for the future.

Senator **Pressler**. You have talked about foreign acquisitions here. How are American telephone companies doing in overseas markets?

Mr. **Sikes**. To my knowledge, they are principally involved in operating specific services, Senator. They are making typically joint venture efforts, frequently with large companies overseas, either the PTTs or other large companies, and they are mostly in cellular, paging, and cable television.

Now, that is the Bell operating companies. AT&T certainly has—in the Netherlands, Italy, Spain, and Korea—made some substantial investments and entered into substantial joint ventures as have other companies such as Motorola in the mobile communications area.

Senator **Pressler**. Now, how would this bill help us overseas or should that be an objective of ours? I mean, some feel that if our telephone companies—if we are structured in such a way that they are investing overseas before they are investing in our own country that that presents a problem. How would this bill affect that?

Mr. **Sikes**. Well, I think it would provide many more options when they determine what to do with the shareholders' money. For example, they might choose to venture with a company, a high tech U.S. company that is undercapitalized for its future needs, and not maybe use that same money to go into cable television in Britain. I mean, I cannot say exactly how they would choose to use their money. I just know that it would give them that option, and today they do not have that option.

Senator **Pressler**. Would it be fair to say that for a public utility, what is viewed by the public as a utility, the guy out there using the telephone, if he hears his telephone company is investing in Japan or Europe prior to investing in the United States, that that first of all may be the fault of some Government regulation or it might be—a lot of factors involved. I am not saying it is right or wrong. His thinking would maybe be very critical of that, whereas opposed to just a regular private company that does not have that public utility. Do you see any problem with a public utility, let us say, in investing all of its extra money overseas?

Mr. Sikes. Well, I probably would have a problem if it were investing exclusively overseas. My big problem, of course, would be if it is investing ratepayer money as opposed to shareholder money, and the Bell operating companies are making significant investments domestically as well as overseas, but of course they are not doing that in the manufacturing area.

Senator **Pressler**. Thank you, Mr. Chairman.

The **Chairman**. Very good. Senator Danforth?

Senator **Danforth**. No questions.

The **Chairman**. Thank you very much, Chairman Sikes and Mr. Firestone. We appreciate your presentation.

We next have a panel—Winston J. Wade, President of Advanced Technologies, A.R. Frischkorn, the President of the Telecommunications Industry Association, Stephanie Biddle, the Executive Vice President, Computer and Communications Industry Association, Lt. General William J. Hilsman, President and CEO, International Mobile Machines Corporation.

Each of the panelists, your entire statement will be included, and we will ask that you please highlight it, if you will, and try to limit it. We are not going to use the clock on either you or the members of the Committee right now, because we are moving right along, but we would appreciate that understanding.

Mr. Wade, we welcome you, and we will be glad to hear from you at this time.

STATEMENT OF WINSTON J. WADE, PRESIDENT, U S WEST ADVANCED TECHNOLOGIES

Mr. WADE. Thank you.

Mr. Chairman, members of the Communications Subcommittee, I am Win Wade, President of U S WEST Advanced Technologies. I appreciate very much the opportunity to appear here today and offer my views on S. 1981, the Telecommunications Equipment Research and Manufacturing Competition Act of 1989. This legislation, I think, is an important step toward resolving what from my perspective is a very critical issue. Namely, what shall be the telecommunications policy to carry this country into the 21st Century, and an important sub-issue, who shall set it? As one who believes consumers and this country have an enormous stake in this issue, I want to personally thank Chairman Hollings and applaud your leadership, sir.

I want to begin by saying I wholeheartedly endorse the goal of S. 1981. Continued economic growth and the enhanced international competitiveness of American industry ought to be at or near the top of this Nation's agenda. Restrictions imposed on the seven regional holding companies by the MFJ are in conflict with that goal. In offering redress from the manufacturing restriction of the MFJ, S. 1981 represents, I think, a very, very positive step.

U S WEST Advanced Technologies is the research and development unit of U S WEST. In addition to our one-seventh ownership in Bellcore, the joint research facility for the seven regional holding companies, we have some 550 scientists, researchers, engineers, technical and support personnel in our own research group located in Colorado. As evidence of our long-term commitment to R&D, we currently have under construction a $42 million state-of-the-art research facility in Boulder, Colorado. We have made a commitment.

While we do have this strong commitment, the work we do in advanced technologies is severely limited by both the manufacturing and information services constraints of the MFJ. We initially viewed the manufacturing constraints as prohibiting us from fabrication, or you might say from bending metal, if you will, but in response to a complaint from AT&T the divestiture court ruled in December of 1987 that the manufacturing restriction extended beyond metal-bending to design and development of telecommunications products.

We constantly struggle to define that line between what is and is not permissible under the MFJ. As an example, we had one instance where attorneys spent six months before giving an engineer the go-ahead to build a prototype control box that would enable an individual to manipulate a video camera from a remote location. Having passed that legal scrutiny, she was able to build that control box in just three weeks. Six months legal time to three weeks engineering is not a formula for advancing United States competitiveness.

There is growing recognition in the academic and business communities that the historical approach to manufacturing in this country has really outlived its usefulness. An article in the April 30 "Business Week" focuses on a smarter way to manufacture. "Scientific American" addressed largely the same subject in an article last fall entitled "The Quiet Path to Technological Preeminence," but the problem, perhaps, is best expressed by a recent story in the "New York Times" that described manufacturing as a succession of walls.

Marketing thinks up a product and throws it over the wall separating it from engineering. Engineering works up a design and tosses it over another wall to manufacturing, which makes the product and hurls it over yet another wall to sales. Those people then try and sell the product to consumers, who perhaps do not want it in the first place.

We think this kind of approach does not work. Innovation should be a customer-driven, cumulative, interactive and reiterative process, not walls. For a telephone company like U S WEST, this means marketers, network planners, information support system planners, researchers, designers, developers, independent manufacturers and sales people must all work together as an integrated team throughout this process.

An example of the benefits of such a process can be found in Bellingham, WA, where U S WEST is conducting a trial of local telephone service alternatives. Bellingham, for U S WEST, has become a living lab—as far as we know, the first of its kind in the Nation—and the interaction between design and development personnel and telephone operations personnel and customers has enabled us to do such things, as compress the time for new service start-up from three days to about 15 minutes.

As the Senate advances a policy that would promote continued economic growth and increased international competitiveness in telecommunications, I would urge a policy that would accommodate a Bellingham Lab. Walls between our R&D entity and our telephone operations will only stifle the development process. I am also concerned that legislation not undo our historic relationship with Bellcore. There are many, to include Judge Greene, who consider Bellcore a national resource, but the viability of Bellcore is jeopardized if the regional holding companies are not allowed to joint venture.

Additionally, although I appreciate and share Chairman Hollings' concern for American jobs and investment, domestic requirements accompanying manufacture freedom would likely be troublesome. Restrictions on importing components and ideas would seriously disadvantage us in competition with foreign companies as well as with American companies not similarly restricted.

Those concerns, I believe, are easily addressed. I have expanded on that in my formal testimony, Mr. Chairman. With those concerns addressed, 1981 in my view would establish an environment conducive to companies like U S WEST investing much more heavily in research and development. That in turn would go a long way toward promoting continued growth and, I think, American competitiveness.

Again, I would like to very much thank Chairman Hollings for his leadership on this issue. U S WEST stands ready to work with senators and staff to move the process forward and later I will be happy to try to answer any questions you may have. Thank you very much.

[The statement follows:]

STATEMENT OF WINSTON J. WADE, PRESIDENT, ADVANCED TECHNOLOGIES, U S WEST

Mr. Chairman, members of the Communications Subcommittee, I'm Win Wade, president of U S WEST Advanced Technologies. I appreciate the opportunity to appear here today and offer my views on S. 1981, the Telecommunications Equipment Research and Manufacturing Competition Act of 1989. This legislation in an important step toward resolving what is a crucial issue, namely: What shall be the telecommunications policy to carry this country into the 21st century? And an important sub-issue: Who shall set it? As one who believes consumers and this country have an enormous stake in this issue, I want to thank Chairman Hollings for his leadership.

I'd like to begin my testimony by giving you some brief background on the research and development operation of U S WEST and how that operation is affected by the MFJ. I'd like to talk about the R&D process itself. And then I'd like to focus specifically on S. 1981, both its strengths and weaknesses as I perceive them.

Advanced Technologies is U S WEST's research and development enterprise. Because of the unique geographic characteristics of our fourteen states, encompassing one-third the land mass of the continental United States, and because of a strong belief that those companies that survive and thrive in the future will be companies that use the latest technologies to satisfy customer needs, U S WEST committed to a distinct research and development entity. Even though, as are the other Regional Holding Companies, we are one-seventh owners of Bellcore, our R&D commitment extends beyond Bellcore -- to a group that can focus on the special needs of a largely rural class of customers, a group that can wrestle with terrains from mountain to desert, a group that can help insure that the telecommunications services for customers in the midwestern, western and pacific northwestern states served by U S WEST are second to none. That group is comprised of 550 scientists, researchers, engineers, technical and support personnel.

U S WEST Advanced Technologies is currently housed in a retrofitted facility in southeast Denver. But as further evidence of our long term commitment to research and development, we have a $42 million, 280,000 square-foot, state-of-the-art facility in the R&D park of the University of Colorado at Boulder under construction. We intend to move into our new quarters in the spring of 1991. We would also hope to expand that facility in the not too distant future as we gain additional freedom and incentive to research, explore and innovate. We would also like the freedom to develop and deploy technologies that will be used, and be useful, in the marketplace -- new products and services that will enhance the quality of life.

I should also mention that we have a relatively small number of people doing R&D work on field assignments overseas, in conjunction with contracts U S WEST International has secured in foreign countries. It's extremely important that research and development work take place close to the customer. So Advanced Technologies tries to be where the need is -- both in this country and abroad.

What we do at U S WEST Advanced Technologies is severely limited by both the manufacturing and information services constraints of the Modification of Final Judgment. We initially viewed the manufacturing constraint as prohibiting us from fabrication -- from chip stamping, from doing volume assembly of circuit boards and electronic equipment -- from bending metal, if you will.. But in response to a complaint from AT&T, the Divestiture Court ruled in December of 1987 that the manufacturing restriction extended beyond metal-bending to the design and development of telecommunications products. So to our battery of lawyers retained to keep us on the straight and narrow, we added another legion, to the point where our laboratory microscopes are frequently dwarfed by legal magnifying glasses trying to define that fine line between what is and isn't permissible under the MFJ. We have had instances at Advanced Technologies where the ratio of lawyer time to engineering time has been in the neighborhood of 10 to 1. We had one specific instance where the attorneys spent six months before giving an engineer the go-ahead to build a prototype control box that would enable an individual to manipulate a video camera from a remote location during a video conference. Having passed legal scrutiny, she was able to build that control box in three weeks. I submit to members of the Subcommittee that six months legal to three weeks engineering time is not the formula for advancing United States competitiveness.

Before commenting specifically on S. 1981, I'd like to touch just briefly on the research and development process, both as it's historically been approached in this country and what we have to learn from our friends (and competitors) overseas. A recent article in the New York Times best describes the traditional American approach to R&D. Focusing on how the Ingersoll-Rand Company compressed the design cycle for a new power tool to one year versus the normal three, the article describes how the project leader "pondered the sorry development process, best seen as a succession of walls. Marketing would think up a product and throw it over the wall separating it from the engineering department. Engineering would work up a design and toss it over another wall to manufacturing, which would make the product and hurl it over a wall to sales. Those people would then try to sell it to customers who perhaps did not want it in the first place." The article goes on to note: "The point at which a product appeared was often fixed by when people's arms got too tired to throw anything more over the wall."

Political scientist and economist Robert Reich identified this same problem with the American production model writing in the October issue of Scientific American. Notes Reich: "Compared with Japanese firms, most American firms draw a sharper distinction between R&D on the one side and production and marketing on the other. . . R&D often has relatively little connection to the rest of a company's undertakings. The proposals that emerge from the laboratories are scrutinized by market and financial analysts on a project-by-project basis and only then, if approved, turned over to manufacturing engineers, technicians and production workers who design and execute processes for making and distributing the products. . . This division prolongs product-development times and causes marketing opportunities to be lost.

"In Japan, research and development proceed simultaneously with manufacturing engineering and the design of productions processes. There is no gap, either geographic or cultural. The process involves continuous trial and error as an innovation shuttles between development and production. Theory does not necessarily precede application, nor does product design necessarily precede process design; all phases occur together."

His point, which I subscribe to, is that innovation should be a customer driven, cumulative, interactive and reiterative process. It requires close connections -- not walls -- between all players so that the necessary information is exchanged and interaction occurs. For a telecommunications company like U S WEST, this means that marketers, network planners, information support system planners, the operations people, researchers, designers, developers, independent manufacturers and sales people must work together as an integrated team.

That point was underscored by an April 30th article in the Wall Street Journal. Entitled "Winning the Race to the Marketplace," the article attributed Japan's "superior technological performance" and marketplace prowess not to the renowned Japanese work ethic, but rather to the workers' propensity for "looking around them" and "talking to one another."

" . . . Japanese researchers interact with product designers, marketeers, and manufacturing engineers to a much greater degree than is common in the U.S.," the article read in part.

I apologize if I seem somewhat redundant on this point, but it's terribly important to understand that just as walls impede innovation, interaction enhances it. Academicians and some in the business world are beginning to understand that. It's essential that policymakers recognize it as well.

Which brings me to the "Telecommunications Equipment Research and Manufacturing Competition Act of 1989." Obviously the bill's main strength is in re-asserting Congressional authority over national telecommunications policy. Rapid technological advancement and increasing telecommunications competition have not been accompanied by a policy to accommodate them. S. 1981 provides that policy with respect to manufacturing.

Additionally, the proposed legislation eliminates, albeit under certain conditions, the MFJ restriction on manufacturing. Our design and development ability is restored; we're even permitted to bend metal.

These positive aspects partially resolve some of the issues that have made the impact of the Modification of Final Judgment not always in the best interest of this country or the consuming public.

Unfortunately, S. 1981 contains terms and conditions for obtaining manufacturing freedom that are, as a general rule, so onerous that there will be very limited freedom. The proposal, if adopted, will not fully achieve its intended effect of enhancing economic growth and the international competitiveness of American industry.

The legislation does not establish an environment conducive to my employer investing more heavily in research and development because it affords little opportunity to realize a reasonable return on that investment. In its current form, S. 1981 does not permit U S WEST Advanced Technologies to become appreciably more innovative; rather, the bill perpetuates an artificial stifling of the R&D process. The proposed legislation might also interfere with telephone company intellectual property rights, an essential incentive for research and development. It imposes domestic manufacturing conditions on one segment of the industry that are not applicable to the rest. And it includes a partial outside ownership provision that might be difficult to satisfy. I cannot convince the officers of my company to increase investment in research and development given those terms and conditions.

These problems are, however, fixable. I can support S. 1981 with the following changes: Continue to permit the Regional Holding Companies to engage in joint research and development ventures, particularly Bellcore; apply the separate subsidiary requirement only to fabrication; drop the domestic requirement or have it apply to the entire telecommunications industry, not just seven companies; eliminate the outside ownership provision; grant the manufacturing freedom on a regional basis rather than requiring each individual operating telephone company to have a manufacturing entity; allow the Regional Holding Companies to employ both debt and equity funding for R&D entities so long as no debt is secured with telephone company assets.

As part of my responsibilities for U S WEST, I serve as a director of Bellcore, Bell Communications Research, the research and development entity jointly owned by the seven Regional Holding Companies. The joint venture prohibition and arm's length subsidiary requirements of S. 1981 effectively put Bellcore out of business. Here is an entity, established by the divestiture agreement, that a number of people, to include Judge Greene, consider a national resource. And yet the proposed legislation shakes the foundation of the Bellcore/Regional Holding Company relationship. Simply put: Bellcore is a joint venture of the seven RHCs; S. 1981 appears to prohibit such joint ventures.

Beyond the joint venture prohibition, S. 1981 takes aim at Bellcore from another angle: The arm's length subsidiary requirement, applicable to any design and development work beyond basic research, would build a wall between Bellcore and the Regional Holding Companies. Bellcore's primary functions are to provide architectural planning and functional specifications for the RHCs, doing the generic work so that it doesn't have to be done seven separate times. Bellcore also participates in the standards setting process and insures nationwide compatibility and interoperability so the pieceparts can work together. While the legislation is ambiguous as to what constitutes basic research, those activities would seem to go beyond such research. The arm's length requirement would deny Bellcore the interaction with the telephone companies necessary to efficiently and effectively perform its primary functions. Rather than facilitate dialogue and feedback between Bellcore and its owners/customers, S. 1981 builds a wall.

The joint venture and arm's length subsidiary requirements, viewed either individually or in concert, vitiate the very reason Bellcore was established in the first place.

Not only does the legislation prohibit joint ventures, but it would also require at least 10 percent minority ownership in a RHC research and development entity, presumably including Bellcore. So we're faced with the added problem of trying to find outside ownership of an entity established to serve seven companies. It's likely that those most eager for a minority ownership position would be foreign manufacturers and foreign telephone companies.

The arm's length requirement would also negatively affect the research work we do at U S WEST. Under the MFJ, we've been free at Advanced Technologies to talk with our telephone company, to share information and ideas among ourselves. Our frustration has been on the other end of the pipe, where we've been restricted in the information we could share with developers and manufacturers. S. 1981 reverses that equation: Our scientists can't talk to the people who are close to the customer, but the scientists can talk to manufacturers -- can manufacture themselves, for that matter. But the synergy, the interplay between the research lab and the customer, is lost.

Let me give you an example. We currently have a project under way in Bellingham, Washington designed to give customers more direct control of their telephone service. We call it the "Bellingham Laboratory." It's a city-wide "living lab," to the best of our knowledge the first of its kind in the nation.

In Bellingham, the normal three-day process of establishing telephone service has been reduced to about 15 minutes. Additionally, customers can sample a variety of service options before deciding what best meets individual needs. They can establish, alter and disconnect portions of their service themselves.

The project is actually a series of open-ended experiments in telephone re-systemization and local service alternatives. The software application at the heart of the Bellingham Lab was developed by U S WEST Advanced Technologies. Of the two dozen people heading up the Bellingham project team, a third work for Advanced Technologies, and the remainder for U S WEST Communications, the operating telephone company of U S WEST. The interaction between our design and development people and the operations and sales personnel of the telephone company has been absolutely essential to the success of the Bellingham Lab. It's doubtful that every idea tested in Bellingham will be practical or successful, but the living laboratory gives us an extraordinary opportunity to get close to the customer and improves our ability to design products and procedures to meet customer needs.

As a footnote, I should mention that U S WEST Advanced Technologies is able to work on the Bellingham project because it primarily involves applications software, and therefore is not prohibited by the December '87 manufacturing order. Had it been a hardware application, the project could not have gone forward with Advanced Technologies involvement.

Bellingham illustrates the kind of interaction necessary whether the application is hardware or software. Under current provisions of S.1981, we would have to close down our living lab. The customer dialogue and feedback which keeps us from doing research and development in a vacuum would be shut off by a wall.

From my perspective, the arm's length subsidiary requirement makes no sense. If the intent is to protect customers and competitors, existing FCC accounting, disclosure and procurement rules provide necessary safeguards. Build a wall between our R&D entity and the telephone company and we're back to the scenario where the telco throws generic needs over the wall, and our research group attempts to throw specific products and services to meet those needs back at them. New systems and applications like those embodied in the Bellingham Laboratory cannot evolve in such an environment. It's simply too costly, too cumbersome, too hit or miss.

Additionally, inherent in an arm's length subsidiary relationship are requirements which could conceivably deny telephone companies their property rights by forcing disclosure of what might ordinarily be considered trade secrets. If a telephone company is barred from having conversations with a research affiliate unless it is willing to simultaneously talk with the world, it is in essence required to forfeit its good ideas to the public domain.

The separate subsidiary requirement is tantamount to a second divestiture. U S WEST would be required to impose artificial barriers between its R&D and telephone operations in the face of fully integrated domestic and foreign competitors who are free to collaborate and innovate.

An environment of walls will not enhance U.S. competitiveness. The risk/reward ratio is too great. The further R&D is separated from the customer, the riskier the enterprise. Less is developed, fewer dollars are devoted to R&D. Absent customer feedback, a great idea in the laboratory becomes an Edsel in the marketplace.

In the product development cycle, much of the risk is in the R&D phase. The reward is in production and procurement. That's where the public interest lies. And S. 1981, in my opinion, more than adequately addresses these public interest issues with requirements placed on procurement, with comparable opportunity afforded all vendors, and with cross-subsidies prohibited. It is not necessary to overburden the risk and delay the research and development process. In doing so, the legislation will fail to achieve what I presume is one of the main goals, namely to give the Regional Holding Companies an incentive to invest in research and development.

Consumer and competitive safeguards are embedded in our current operations. For example, when U S WEST Communications wanted to develop a voice messaging system, Advanced Technologies was approached for assistance. Acting as a technical liaison, we were able to translate the needs of customers and the ability of the network into specific requirements for a request for proposals sent to qualified bidders. Again, as with the Bellingham project, this involved applications software and was therefore permissible under the MFJ.

At any rate, Octel, a California-based manufacturer, won the contract. Because voice messaging is a competitive, enhanced service, FCC rules require that Advanced Technologies' work on the project not be charged to ratepayers. Additionally, the FCC requires approval of comparably efficient interconnections plans so competitors can have the same ability to offer a service through our network as we have. Following existing accounting and interconnection rules, ratepayers were protected and so were competitors. And customers were afforded a new service that had immediate acceptance in the marketplace.

The role of Advanced Technologies in helping bring that new service to market was crucial. Existing rules insured that we could make that contribution while at the same time safeguard consumers and competition.

I'd like to touch briefly on other provisions of the legislation that are of concern, then conclude my testimony and try to answer any questions you might have.

While I appreciate and share Chairman Hollings' concern for American jobs and investment, the requirement that all manufacturing activity, to include design, development and fabrication, take place within the United States is troublesome and likely unworkable. As I mentioned earlier, Advanced Technologies currently has a small complement of R&D people working on projects overseas -- in England and Hong Kong, primarily. Presumably, under S. 1981, we would have to close down those foreign operations and move our R&D away from the customer. That would severely jeopardize our ability to be successful in foreign markets.

Beyond that, the domestic requirement extends to the manufacture of components. Several crucial components, including select computer chips, are not available in this country. So a domestic content requirement effectively forecloses us from fabrication.

It is unclear whether the domestic provision would prevent us from importing ideas -- our own and those of others. After decades of watching our best ideas fully exploited by foreign competitors, do we really want to deny ourselves the opportunity to exploit theirs? The marketplace for telecommunications has become global. We've gone from being the world leader in telecommunications to being one of the leaders. We cannot enhance our position by withdrawing from the global marketplace, including the marketplace of ideas.

Some final thoughts on the domestic requirement. Quite simply it is, to my knowledge, unprecedented in the history of this country to adopt a rule that applies to seven companies in a particular industry. Unprecedented and unfair. No one else lives with such requirements. No one else could live with them.

Regarding the outside ownership provision -- the requirement that at least 10 percent of any manufacturing subsidiary be owned by someone other than the Regional Holding Company. I mentioned that earlier as it applies to Bellcore. But the provision would also apply to U S WEST Advanced Technologies. We obviously could make a public offering. My concern is who would want to own that 10 percent, except for possibly a foreign manufacturer? I'm not quite sure what such a provision accomplishes, or how to satisfy it.

Two final concerns. As I read S. 1981, it would seem to require that each operating telephone company named in the MFJ have its own research and development entity. For U S WEST and for all of the other Regional Holding Companies except one, that would mean multiple R&D entities and involve unnecessary duplication. For reasons of efficiency, we have not retained the three individual operating telephone company identities we inherited at divestiture. It would serve no useful purpose to resurrect them.

I'm also concerned with the funding restrictions the bill would impose on R&D. A literal reading suggests that only debt funding is to be allowed and that debt could not be secured with telephone company assets. While I have no problem with the latter, I would hope the legislation would not prohibit either an equity infusion from the holding company, or debt financing independent of telephone assets.

In closing, I'd like to urge the Subcommittee to tear down the walls S. 1981 would erect in the product development process. I think it's worth asking: What would be the effect on AT&T, on IBM, on Digital Equipment Corporation, on Apple Computer if they were forced to separate marketing from research and development? These are companies that have succeeded because they have broken from the traditional model.

We would like that same opportunity for success. As I mentioned earlier, modifications to the proposed legislation would result in a telecommunications policy, as far as the manufacturing issue is concerned, that will enable the United States to retain world leadership in telecommunications. First, permit continued joint ventures involving Bellcore. Second, make the separate subsidiary requirement applicable to fabrication only. Third, revise the domestic provisions so that they, too, apply only to fabrication and apply to all telecommunications companies, not just the Regional Holding Companies. Next, remove the minority ownership requirement. Additionally, permit the Regional Holding Company to have a manufacturing entity, rather than each individual operating telephone company. Finally, allow the Regions to use debt and equity funding for R&D. These changes will produce public policy that serves consumers, competition and this country.

The MFJ debate has gone on for a number of years. My hope is that it is rapidly coming to a close. Again, I thank Chairman Hollings for his leadership on this issue. We stand ready to work with Subcommittee and Staff to move the process forward.

Thank you. I would be glad to try to answer any questions you might have.

The **Chairman**. Thank you very much. General Hilsman?

STATEMENT OF LT. GEN. WILLIAM J. HILSMAN, PRESIDENT AND CEO, INTERNATIONAL MOBILE MACHINES CORP.

General **Hilsman**. Thank you, Mr. Chairman, members of the Subcommittee. I also thank you for the opportunity to testify on the Telecommunications Equipment Research and Manufacturing Competition Act of 1989.

As all of you are aware, the legislative underpinning for telecommunications in this Nation goes back to the Communications Act of 1934. Prior to divestiture of the Bell System, the need for strong policy and legislative guidance was probably not as critical as it is today. The very future of our Nation in the world telecommunications marketplace depends on our ability to respond to major moves in the marketplace on the Pacific Rim, and certainly to major moves in the marketplace that will result from Europe '92. I commend you, Mr. Chairman, for moving boldly into these issues.

On the 24th of July, 1989, our company, International Mobile Machines, submitted a written statement to the U.S. Congress in support of legislation allowing Bell operating companies to participate with unaffiliated telecommunications equipment manufacturers in research and development for new telecommunications products.

On October 31, 1989, we jointed eight other small manufactures who wrote to the Congress, supporting legislation that would change a portion of the AT&T Consent Decree and allow the Bell Operating Companies to participate with unaffiliated telecommunications equipment manufacturers in research and development for new telecommunications products.

Since that time, 28 small manufacturers have joined us to indicate that they would support this position, and that they would have specific issues that they could discuss.

I would like to stress at this time that although we support the goals of the bill—greater competitiveness for America in the world marketplace—we have taken a narrower position than your total bill, and I believe a position that is gaining a broad consensus in the industry.

Your bill addresses the entire manufacturing process, to include the research and development phase through the fabrication phase, and your bill allows for direct equity ownership of affiliates. Our statement today addresses only the research and development phase of the entire manufacturing process and sets up the business relationship as an R&D investment by Bell Companies into companies like ours with a return on investment by the sale of our products later on. I believe this type of focus takes away much of the arguments against the monopoly practices and gets a long way toward the goals that you have laid out.

Let me give you a little background for these issues. Prior to assuming my current position of President of IMM, I had spent approximately 30 years in the United States Army and had direct responsibilities in the telecommunications field throughout that time. In my last three years of Federal Government service I was the major spokesperson for the Defense Department on the issue of the break-up of the Bell System and the MFJ. One major issue concerned our ability to continue world leadership in telecommunications if we lost the ability to finance research and development in any significant way. This issue revolved around the Bell Telephone Laboratories, a laboratory that clearly was responsible for major research and development programs that came to fruition and that were fueled by the entire Bell System.

Let me relate to you now two stories. One story you might call the "The side of the Angels" story. The other story you might call, "well, Bill, you got a vested interest" story. I believe both are necessary to make the point. First, the "side of the angel" story.

When I first entered the Army Signal Corps as a young lieutenant, I became acquainted with the work of the Bell Labs. I continued to work with them throughout my military career. I believed, and so testified during the MFJ hearings in 1982, that the Bell Telephone Laboratories were a national treasure. I believe from my own direct experience that a great deal of our world leadership position in telecommunications came from the fact that the Bell Labs had such depth and breadth in what they did for the future of America.

During my testimony, I went further to say that we really had to watch this issue carefully, because it would be very difficult to measure the loss of this type of treasure until the year 2000, when it would be too late to recover. Some six years after the consent decree was finalized, we see the Bell Labs today much more narrowly focused as an R&D facility to support AT&T. The Bell operating companies, with their enormous revenue base, for the most part are doing little basic R&D. They are prohibited by the interpretations of the MFJ.

This issue needs to be addressed now, not in the year 2000, and in my estimation the situation needs to be corrected now for the good of America and our very future as world leaders in telecommunications.

That is my quick "side of the angel" story. Now my "Bill, you might have a vested interest" story, and that involves a specific example that our company, the IMM Corporation, experienced in the past few years.

We have developed and are marketing an all-digital, spectrum-efficient radiotelephone system. We sell that product into rural America today. Two years ago, the Federal Communications Commission approved the next generation of cellular communications—a digital cellular program. The technology chosen was the technology that we have in our current rural radio marketplace.

We entered into a dialogue with BellSouth that culminated in a draft Heads of Agreement where BellSouth was to invest $50 million in an R&D contract with us for the development of a digital cellular system. During this same period of time, Judge Harold Greene gave a broader definition of manufacturing to include the research and development phase.

Prior to this clarification, there was some thought that BellSouth could go forward with this type of a program. With this further definition by Judge Greene, it was clear that any RBOC would be prohibited from the R&D investment and therefore our program could not go forward.

What did all this mean? I would suggest that the United States could have had a one-and-a-half to two-year jump in bringing digital cellular technology to the marketplace, so I believe the losers in this episode were the United States and its potential world leadership in the entire digital cellular program; the American consumer, who could have had a better and cheaper, more robust cellular service quicker, and obviously we at IMM, a small company who had the technology but could not resource it into the future programs.

So we did what many other small, high tech firms have done. We needed to get that deep R&D support. We went off-shore and got it.

With this specific example that I knew to be real, I discussed with other small manufacturers their own experiences and found they, too, had specific cases which they could articulate. Their results were that they either could not get their programs financed at all, or they went to non-U.S. companies to get financing, which then resulted in a loss of intellectual property patent positions for our country, a loss of jobs, because it is almost axiomatic that whoever finances the R&D gets to do the manufacturing wherever they want, and further, an erosion of America's leadership and our competitive position in the global telecommunications marketplace.

So in conclusion, IMM and other small businesses like us are telling our story. In some sense, I guess our story is on the side of the angels. We are all small businesses, the very life-blood of America, where often dreams begin. We are talking about research and development and the ability to finance the future of America.

I hear the arguments. Some say more money is going into research and development today than ever before. I say, wonderful. But I go on to say, we could have more yet, if we could tap the resources of the Bell operating companies.

Thirdly and lastly, we have all made it perfectly clear—we, the small business group here—that we are not recruited by the RBOCs into this argument. We are not here to support the RBOCs per se. We are here to speak out for what we believe is the right course for America.

Thank you, Mr. Chairman.

Senator HOLLINGS. Thank you.

Ms. Biddle.

STATEMENT OF STEPHANIE BIDDLE, EXECUTIVE VICE PRESIDENT, COMPUTER & COMMUNICATIONS INDUSTRY ASSOCIATION

Ms. BIDDLE. Thank you, Mr. Chairman and members of the committee. I am Stephanie Biddle, Executive Vice President of the Computer & Communications Industry Association. And I am happy to be here this morning to discuss CCIA's views on this important matter.

We have a long history of participation in national telecommunications debates, and an even longer and stronger record as a serious supporter of enforcement of antitrust law. And I would also like to note just for the record that we have the utmost respect for Judge Greene and believe that his management of the AT&T litigation set a new benchmark against which the administration of all future complex antitrust cases will be measured.

Our association is comprised of some 60 companies who are manufacturers and providers of computer and communications equipment and services. They are drawn from every sector of the industry and range in size from small entrepreneurial firms to many of the largest in the world. Our membership includes AT&T and three of the Regional Bell companies. But the vast majority of our members are customers of, suppliers to, and current or potential competitors of both AT&T and the RBOCs.

CCIA shares many of the underlying concerns evidenced by S.1981. And a special task force of our members, which reflected all affected sectors of the industry, devoted several months to addressing these complex issues with the goal of finding a practical way to allow the Bell companies a significantly enhanced role in R&D and greater flexibility in their efforts to provide their customers with modern services, without raising the continuing specter of cross-subsidy, self-dealing, or harm to competition or to ratepayers.

CCIA supports the Bell companies entry into information services. And while we do not support a complete removal of the manufacturing restriction, we do think that that restriction, as it is currently interpreted, should be modified.

Specifically, CCIA believes that the Bell companies should be permitted to do their own generic research and development work; to hold intellectual property rights on any achievements they generate; and to make licensing decisions based solely on their own business judgment, unless those rights are necessary to achieve network transparency by their competitors in which case they should be licensed on a non-discriminatory basis.

We believe the Bell companies should be permitted to interact freely and continually with their suppliers during the development and design of products, and should be permitted to contribute R&D funding to other firms' development projects, and to receive royalties on the sale of those products to third parties, but not on products they purchase for use in their own regulated businesses.

And we believe, further, that they should be free to develop their own applications software, be able to own or have an equity interest in applications software firms, but not to own or have an equity interest in manufacturing firms.

We think there are a number of significant advantages to this approach, which would contribute significantly to achieving what we understand to be the underlying concerns of S.1981.

For example, our proposal would increase the domestic and international competitiveness of U.S.-based telecommunications manufacturers. More capital would be available for R&D by small- and medium-sized firms, and in many instances, it is only the limited availability of these funds which is the obstacle to such firms bringing products to the marketplace in a timely fashion.

Removing uncertainties surrounding the extent to which RBOCs may collaborate with their suppliers would eliminate much of the waste in the R&D process, which is now virtually built-in, and allow more R&D to take place.

Close interaction between customer and supplier creates more efficiency in the development process and shortens design cycles, which brings products to market sooner and makes their firms more competitive.

And we think RBOC R&D investments are likely to be channeled to smaller U.S.-based firms, because they are the ones with the unmet funding requirement, and the close interaction required in this process, favors proximity.

Our proposal would also increase investment in R&D. Clarifying the RBOCs' rights to own and license intellectual property would create financial incentives to intensify generic basic research efforts. Permitting RBOCs to earn royalties on the sales of third parties' products in which they have invested would match the potential reward of such endeavors to their inherent risk. RBOC funding channeled to small firms would also leverage that R&D funding, because smaller companies have much smaller overhead in managing R&D than larger ones do.

We think that our proposal would also accelerate the introduction of innovative products into the network. Because close interaction of RBOCs with their suppliers would reduce the time wasted in the current trial and error approach of trying to guess what their customer wants.

Also, the ability of the RBOCs to invest in the R&D of smaller competitors who have no installed base to protect would lead to more generation-skipping product innovation. And smaller firms' ability to raise R&D funds from their customers makes them more competitive in the equipment marketplace and would bring increased pressure on larger firms to bring more innovative products to the marketplace more quickly.

We also believe our proposal would contribute to the creation of U.S. jobs. That is because smaller U.S. firms are the most likely beneficiary of RBOC R&D investment. And historically, it is small, just-emerging companies who contribute most significantly to the creation of new jobs.

We also believe that smaller U.S. firms have a very strong incentive to create jobs where they are headquartered, because it involves no additional costs for them to do so.

Also, the infusion of R&D capital would help smaller firms overcome their primary obstacle in leapfrogging technology. Once they accomplish this, they have a very strong incentive to ramp up their manufacturing as quickly as possible to capitalize on that new innovation. This creates more U.S. jobs.

We believe, further, that the proposal would be beneficial to the U.S. balance of trade in telecommunications products. And that is because current U.S. exporters would not be at any risk of facing mirror domestic content requirements in their foreign markets.

And also, because the only thing which keeps many small- and medium-sized firms from becoming exporters is that they lack the capital to simultaneously fund R&D and develop new markets, which is a very expensive process.

And as firms shorten their product development cycles, they inevitably become more competitive and their products are more attractive internationally and domestically.

We believe telephone ratepayers would be protected under our proposal because funds transferred to unaffiliated third parties for R&D are easily traceable one-time transactions. The distinction we suggest between the treatment of funding for products intended for the regulated network and those intended for sale to third parties also greatly simplifies the job of regulatory oversight.

And not permitting royalties to be earned by unregulated RBOC entities on sales to their own regulated entities dramatically reduces incentives to buy overpriced equipment.

We believe also that regulatory costs, which are eventually borne by the ratepayers, is significantly less if incentives are removed than it is in an endless attempt to find and enforce the "perfect" safeguard.

Finally, we believe that CCIA's proposal avoids the historic problems of unwarranted procurement preference and potential foreclosure of markets because the incentives created by limited duration contractual arrangements to fund a particular R&D or design project are vastly different from those associated with owning a captive supplier or even holding an equity interest in that supplier.

No artificial preference for one supplier over another is created. The only incentive is cost-effectiveness, and the attractiveness of that product in the marketplace. And RBOCs would continue to have the incentive that we believe the MFJ created to make their buying decisions based on the requirements of their networks, the requirements of their customers, and on the price-performance of the product being offered.

I thank you. This concludes the summary of my statement, and I would be pleased to answer any questions you might have.

[The statement follows:]

STATEMENT OF

STEPHANIE BIDDLE
EXECUTIVE VICE PRESIDENT
COMPUTER & COMMUNICATIONS INDUSTRY ASSOCIATION

Good morning Mr. Chairman and Members of the Subcommittee. I am Stephanie Biddle, Executive Vice President of the Computer & Communications Industry Association (CCIA), and I am very pleased to appear before you this morning to present CCIA's views regarding the Modified Final Judgment's line-of-business restriction on manufacturing by the Regional Bell Operating Companies.

As this Subcommittee knows, CCIA has a 16-year history of active participation in national telecommunications policy debates before the Congress and the Federal Communications Commission. The Association has an even longer, and equally strong, record as a serious supporter of vigorous enforcement of antitrust law. We were, for example, early proponents of passage of the Tunney Act, active participants in the National Commission for Review of Antitrust Law and Procedure's consideration of techniques to manage complex antitrust litigation and, I believe, the first to suggest to Judge Greene the applicability of the Tunney Act to the proceedings to modify the 1956 AT&T Consent Decree.

I would also like to note for the record that CCIA has the utmost respect for Judge Greene as a jurist and believe that his management of the AT&T antitrust litigation set a new benchmark against which the administration of all future complex antitrust cases will be measured. Given this history, CCIA does not view the current debate over the continuation of the lines-of-business restrictions in the MFJ lightly.

CCIA is comprised of some 60 companies who are manufacturers and/or providers of computer, information processing, and telecommunications products and services. Drawn from virtually every sector of the computer and communications industry, CCIA's member companies range in size from small, entrepreneurial firms to many of the largest in the industry. Collectively, CCIA's members generate annual revenues in excess of $155 billion and employ well over a million people.

While CCIA is pleased to include within its membership AT&T and three of the Regional Bell Operating Companies -- Ameritech, Bell Atlantic, and BellSouth -- each of whom has its own direct interests in, and views on, the lines of business restrictions contained in the MFJ, the vast majority of CCIA's membership are customers of, suppliers to, and current or potential competitors of AT&T and the RBOCs in a variety of markets. These companies share a primary set of telecommunications policy concerns:

1) that they have available to them a modern, efficient, cost-effective national telecommunications network which enables them to be competitive in both domestic and world markets;

2) that they have a reasonable opportunity to compete in current and emerging product and service markets; and

3) that national policy in this critical area includes an element of certainty upon which logical planning and allocations of resources can be undertaken.

Perhaps because of the diversity of our membership, CCIA has always made a serious effort not to approach issues as if they were either "black" or "white." Our preference instead is to attempt to separate the facts from the rhetoric and to examine proposals for change from a perspective formed by the realities of the marketplace.

One example of the results of this approach is the fact that during the same Tunney Act process in which CCIA, along with many others, advocated the establishment of the manufacturing ban, we were the only industry trade association to support a change in the originally-proposed MFJ to allow the RBOCs to market customer premises equipment (CPE) manufactured by others.

A more recent example is CCIA's conclusion that the current MFJ restrictions are not, as many contend, inextricably tied together. In testimony before both the House Telecommunications Subcommittee and the House Subcommittee on Economic and Commercial Law CCIA has expressed its support for allowing the Bell Operating Companies to provide a full range of electronic information services under the conditions set forth in the FCC's Computer III rules. We do not support a complete removal of the restriction on manufacturing; CCIA does, however, think that this restriction, as currently interpreted, should be modified.

CCIA shares many of the same concerns evidenced by S. 1981, The Telecommunications Equipment Research and Manufacturing Competition Act of 1989. Among these are CCIA's recognition of the critical importance of:

- increasing the competitiveness of U.S-based industry both in domestic and international markets;
- creating an economic environment conducive to greater investment in research and development;
- accelerating the introduction of innovative new products into the public switched network;
- encouraging the creation of U.S. jobs;
- contributing to a positive U.S. balance of trade in high technology goods and services;
- protecting telephone ratepayers from costs associated with unregulated ventures; and
- avoiding the historic problems of unwarranted procurement preference and the foreclosure of

significant portions of the telecommunications equipment market.

As a result of our concerns, a special task force of CCIA members, reflecting all affected sectors of the industry, devoted several months to addressing these complex issues. CCIA's goal was to find a practical way to allow the Regional Bell Companies a significantly enhanced role in research and development and greater flexibility in their efforts to provide the consumer with a broader array of modern services efficiently and cost effectively without raising the spectre of cross-subsidy, self-dealing, or harm to competition or to telephone ratepayers.

Ideology was not a guiding principle in these debates. The only "litmus" test applied to each potential approach was consistency with the economic realities of the telecommunications business. The position CCIA endorses reflects the practical experience of businessmen who have designed and brought innovative products to market, faced competition, created jobs, and met the tests of the marketplace.

While no task force product can ever purport to mirror in every detail the precise views of 60 different companies, a single position statement was recommended by the task force, endorsed by CCIA's Executive Committee, and adopted unanimously by CCIA's Membership. I would like to devote the balance of my comments to explaining that position and why CCIA believes that its approach would contribute to the attainments of the goals outlined above.

It is CCIA's position that, contrary to Judge Greene's December 1987 "manufacturing decision," it is both possible and beneficial to define a practical line between RBOC fabrication of equipment, which we believe should be barred, and activities in the areas of research and development, close interaction with suppliers, and the funding of design of specific products which are highly beneficial and should not be prohibited.

In his decision, Judge Greene broadly interpreted the term "manufacture" to include research and development, design and, some would argue, even detailed product procurement specification. CCIA believes that the scope of the term "manufacture," as interpreted by the District Court, is at variance with the common acceptance and use of the term in our industry. In our view, in the two and a half years since the release of the "manufacturing decision," the ambiguities concerning just what the RBOCs can and cannot do has had a chilling effect on the rate of innovation in the telecommunications equipment market and the competitiveness of firms participating in that market.

To advance the development of high technology equipment, software and services, CCIA believes the following principles should apply to the Bell Companies' permitted activities in connection with basic and applied research and development and the design of specific products and would support any interpretation or clarification of, or modification to, the Modified Final Judgment which may be necessary to accomplish these goals:

1 R&D- The Bell Companies should be permitted to engage in their own basic and applied research and development activities. Bell Companies should be permitted to hold intellectual property rights on any advancements generated therefrom. Bell Companies should be permitted, as outlined below, to engage in such activity on their own, through Bellcore or in collaboration with a third-party vendor.

The Bell Companies should further be permitted to enter into business arrangements with third parties for specific development projects, including contractual arrangements that would permit receipt of royalties, fees or other customary financial arrangements subject to the conditions set forth in Sections 2 and 4 below.

2 Intellectual Property Rights - In general Bell Companies should be permitted to make licensing decisions based solely on their business judgement, however, any patents, know how or other intellectual property right owned entirely or in part by the Bell

Companies or Bellcore which is necessary for the purpose of achieving network transparency, interconnection, or interoperability should be licensed on a non-discriminatory basis, on reasonable terms and conditions and in a timely manner to any vendors of telecommunications equipment or software for those purposes. There should be no limits on the royalties that could be earned through such intellectual property licensing or sale.

3 Interactions with Manufacturers During Product Development - A Bell Company should be permitted, individually or through Bellcore, to engage in close collaboration with manufacturers during their design and development of hardware, software or combinations thereof. The relationship should permit frequent interaction, feedback, modification of designs, testing and evaluation of prototypes and/or production design units as the Bell Company or Bellcore determines whether the particular telecommunications products being designed and developed meets its needs. As an example, a Bell Company or Bellcore should be permitted to contract for the design and development of a specific prototype of a product and interact closely with the vendor during the creation,testing and documentation of that design.

4 **Funding Specific Product Design and Development** - A Bell Company should be permitted to fund design and development of specific hardware, software or combinations thereof for its own use and for sale to others. Business arrangements for such funding may not involve Bell Company ownership of, or an equity interest in, the vendor except in the case of vendors of applications software as provided for in Section 6 below.

To the extent that the product is used solely or essentially only by the funding Bell Company, such funding should be provided by a regulated entity and be subject to regulatory oversight and the funding arrangements should include only provisions to fully recover any funding and a reasonable return on capital.

If the product is for sale to others, such funding should be provided by an unregulated entity and there should be no limitations on the earnings from such sales.

For the funding of products that are both for use by a regulated entity and for sale to others, appropriate mechanisms should be in place to protect the interests of ratepayers.

5 Technical Interfaces - The Bell Companies should comply with the requirements of current FCC rules to disclose new technical interfaces planned for the network so that all product vendors would have the opportunity to compete for the Bell Company's business and/or develop new services or products which connect to or could be used on the local networks.

6 Development of Applications Software - A Bell Company should be permitted to design and develop, on its own or in collaboration with a vendor, any applications software, i.e., any software other than that which is integral to the operation of telecommunications equipment. There should be no limitation on Bell Companies' equity interest in, or ownership of, any vendor which is exclusively engaged in the design, development and production of such applications software.

There are, we believe, a number of significant advantages to the approach detailed above. First, CCIA believes that it is important to distinguish realistically between areas where the RBOCs are likely to make significant contributions and those in which they simply have no experience to offer. Having never manufactured anything, the RBOCs clearly have no particular expertise to bring to the fabrication process. For the same reason, they would have equally little to contribute to the process of actually designing or engineering a manufacturable product.

What the RBOCs do have is a wealth of experience in network planning and systems engineering and, through Bellcore, expertise in conducting generic research. Such activities, whether basic or applied, are aimed largely at contributing to the body of scientific knowledge on which the evolution of network technology depends and we believe that they can make a substantial positive contribution in this area if there is a reasonable economic incentive for them to undertake such work. In addition, RBOCs have a very significant body of experience in understanding the needs of their customers.

This combination is a tremendous resource for consumers if the RBOCs apply it to the creation of the "applications" software which allows particular tasks to be performed more efficiently or makes information easier to access and use. It is the development of applications software that will drive the technology because it drives the use of technology. For this reason, RBOC endeavors in this area would provide enormous benefits to their customers, particularly small businesses and residential consumers.

Similarly, the RBOCs' network and customer knowledge is a beneficial resource to equipment manufacturers if they apply it to the equipment development process in cooperation with those manufacturers. Few telecommunications equipment manufacturers interact directly with end-users and those that do frequently have only limited expertise in networks. Permitting the RBOCs to bridge this knowledge gap would shorten the design cycle and bring more useful products to market sooner.

Second, it is the collective experience of CCIA's member companies that in a technically complex area like telecommunications customers simply must be able to talk freely and constantly with their suppliers. Such close collaboration between customers and suppliers is more than beneficial, it is a critical element in the innovative process of arriving at a meaningful product. Placing artificial limits on the extent of such interaction wastes scarce resources -- human and financial--inevitably delays the introduction of new products and services, and makes telecommunications equipment manufacturers less competitive.

Third, allowing RBOCs to contribute research and development funding to the specific development projects of unaffiliated manufacturers and to receive royalties on the sale of such products to third parties solves what we believe is the central question: how to allow the RBOCs to play a significantly larger role in research, development, and product design without raising an endless controversy over potential procurement preference or market foreclosure.

Under CCIA's proposal quite different incentives would exist than would be created either by RBOC ownership of a captive manufacturer or an RBOC having a direct equity interest, no matter how small, in a particular supplier. One difference would be that the payment of royalties would only result from the sale of a successful product to others. Purchases of equipment for the regulated network could not create earnings for the unregulated side of the business.

Another significant advantage is that allowing an RBOC to contribute funding for specific product design and development by third parties would create a business relationship of only limited duration rather than an ongoing interest in the long-term success of any particular supplier at the expense of another. Future business relationships with other firms would not be prejudiced and further business relationship with any supplier would depend solely on the success of previous projects.

Fourth, CCIA's proposal would address the needs of the telecommunications market and provide much greater flexibility for the RBOCs without raising the troubling prospect of making U.S. manufacturing firms, for the first time in our history, subject to federal regulation.

Fifth, there would be no risk of foreign governments retaliating against U.S.-based telecommunications equipment manufacturers by the imposition of severe domestic content requirements in equipment procurements by their telecommunications service providers.

Finally, CCIA believes that its position would make a significant contribution to achieving each of the underlying concerns of The Telecommunications Equipment Research and Manufacturing Competition Act of 1989. For example:

Under CCIA's proposal competitiveness of U.S.-based telecommunications manufacturers would be increased because:

- o more capital would become available for R&D and product design by small and medium-sized firms. In many instances, the limited availability of such funds is now the primary obstacle to such firms bringing products to the marketplace in a timely fashion;

- o removing the current uncertainties surrounding the extent to which RBOCs may collaborate with their current or potential suppliers would eliminate much of the waste of scarce R&D resources now virtually built into the process and allow more R&D to be accomplished;

- o assuring that close interaction between customer and supplier is permitted would create more efficiency in the development process and shorten design cycles. This would bring more innovative products to the market sooner which would make the manufacturing firm more competitive both in domestic and international markets; and

- o RBOC R&D investments are likely to be channeled to smaller U.S.-based firms first because they are the ones which have an unmet funding requirement and second because the close interaction required in this process favors proximity.

Under CCIA's proposal an economic environment conducive to greater investment in research and development would be created because:

- o clarifying an RBOC's rights to own and license intellectual property would create a financial incentive to intensify generic basic research efforts;

- o permitting RBOCs to earn royalties on the sales of third parties' products in which they have invested would match the potential reward of such endeavors to their inherent risk; and

- RBOC R&D funding channeled to small firms allows both the RBOC and the recipient company to leverage their available R&D funds because small firms have a much smaller overhead in managing R&D than do larger companies.

Under CCIA's proposal introduction of innovative products into the public switched network would be accelerated because:

- close interaction of RBOCs with their suppliers would greatly reduce time wasted in the current "trial and error" approach of manufacturers trying to meet their RBOC customer's needs;

- RBOC ability to invest in the R&D and design of smaller equipment competitors who have no installed base to protect will lead to more "generation skipping" product innovations; and

- smaller firms ability to raise R&D funds from their RBOC customers will make them more competitive players in the equipment marketplace and bring increased pressure on larger firms to bring more innovative products to the marketplace more quickly.

Under CCIA's proposal the creation of U.S. jobs will be encouraged because:

- o smaller U.S. firms are the most likely beneficiary of RBOC R&D investment and historically it is small, just emerging companies who contribute most significantly to the creation of new jobs;

- o smaller U.S. firms have a strong incentive to create more jobs where they are headquartered which entails no new costs associated with adding foreign-based managerial or administrative support; and

- o infusions of R&D capital helps smaller firms overcome a primary obstacle in "leapfrogging" technology. Once accomplished, such firms have a strong incentive to ramp up their manufacturing quickly which creates more U.S. manufacturing jobs.

Under CCIA's proposal there would be positive contribution to the U.S. balance of trade in telecommunications products because:

- o current U.S. exporters would not be at risk of facing mirror domestic content requirements in their foreign markets;

- often the only thing which keeps small and medium-sized U.S. manufacturers from becoming exporters is the lack of capital to simultaneously fund R&D and the development of new foreign markets; and

- as firms are able to become more competitive through the shortening of their development cycles their products are more attractive internationally as well as domestically.

Under CCIA's proposal telephone ratepayers would be protected because:

- funds transfered to unaffiliated third parties for R&D and design projects are easily traceable one-time transactions;

- the distinction we suggest between treatment of funding for products intended for the regulated network and those intended for unregulated sale to third parties greatly simplifies the job of regulatory oversight;

- not permitting royalties to be earned by unregulated RBOC entities on sales to their own regulated entities dramatically reduces economic incentives to buy overpriced equipment; and

- the regulatory cost borne by ratepayers is significantly less if incentives are removed than it is in an endless effort to enact the "perfect" safeguard or to enforce such safeguards.

Under CCIA's proposal historic problems of unwarranted procurement preference and potential foreclosure of markets are avoided because:

- the incentives created by limited duration, contractual agreements to fund a particular R&D or design project are vastly different from those associated with owning a captive supplier or even holding an equity interest in a supplier;

- no artificial preferences for one potential supplier over another are created; and

- RBOCs will continue to have the incentive the MFJ created to make their buying decisions based on the requirements of their networks and their customers and on price-performance of the product.

Mr. Chairman, this concludes my prepared remarks. I would be pleased to answer any questions you or other Members of the Subcommittee may have.

Senator HOLLINGS. Thank you very much.
Mr. Frischkorn.

STATEMENT OF A.R. FRISCHKORN, JR., PRESIDENT, TELECOMMUNICATIONS INDUSTRY ASSOCIATION

Mr. FRISCHKORN. Thank you. Mr. Chairman, and members of the subcommittee, I appreciate the opportunity to appear here today to convey to you TIA's views concerning S. 1981 and the important public policy issues raised by this legislation, and other proposals which would remove or substantially modify the MFJ restriction on Bell operating company entry into the telecom manufacturing business.

As you know, our Vice Chairman, Mike Birck, was originally scheduled to testify on behalf of TIA. Unfortunately, Mike's mother passed away last Friday and he is unable to appear before the subcommittee today.

I deeply regret Mike's absence, not only because of the tragic circumstances that make it impossible for him to be here, but also because Mike has a wealth of hands-on experience in the industry to share with the subcommittee.

With this in mind, I would commend to you Mike's written testimony, which describes in greater detail the beneficial impact which the more open, competitive environment created by the MFJ has had on Mike's own company, Tellabs, Inc., and on the whole domestic telecom equipment manufacturing industry.

At the outset, let me emphasize that TIA supports congressional efforts to ensure that the line of business constraints contained in the MFJ remain consistent with our national interest.

TIA also supports S. 1981's stated goal of enhancing this Nation's industrial competitiveness. However, TIA continues to believe that removal or substantial modification of the MFJ manufacturing restriction at this time would have a significant adverse impact on competition, innovation, consumer welfare, and the competitiveness of the U.S. equipment industry in domestic and foreign telecommunications markets.

As the statistics cited in Mike's written statement and in the comprehensive study of the U.S. telecom manufacturing industry appended to his testimony indicate, the MFJ has had a dramatic positive impact on the domestic telecom equipment marketplace. Since divestiture, equipment prices have declined, industry research and development expenditures have risen, the quality of products in all areas has been greatly enhanced, many new competitors have entered the market, the efficiency and competitiveness of U.S. manufacturers has increased, and there has been a proliferation of new and improved telecommunications products and services.

To succeed in the highly competitive post-divestiture environment, U.S. manufacturers have had to become increasingly efficient, innovative, and quality conscious. However, for those firms willing and able to respond to the challenge, the MFJ has provided tremendous opportunities for growth, by creating the new industry structure in which all manufacturers are able to compete on the merits of their products for sales to the BOCs and other potential customers.

The increasing strength of domestic manufacturers in leading-edge, high-tech telecom equipment markets is reflected in the Commerce Department's most recent trade figures, which show a $673 million improvement in the overall U.S. balance of trade in telecommunications equipment during 1989.

Without question, action can and should be taken by the Congress to further advance the international competitiveness of U.S. manufacturers. TIA's written testimony includes a summary of the Association's recommendations for achieving this objective. However, it would be a grave mistake for Congress to conclude that removal of the MFJ manufacturing restriction constitutes a viable means of enhancing the global competitiveness of the domestic telecom manufacturing industry.

The most predictable effect of removal of the MFJ manufacturing prohibition is the formation of RBOC joint ventures with foreign manufacturers in the strategically significant central office switch market, and potentially in other product areas as well. A recent Department of Labor staff study concluded that 18,000 to 27,000 U.S. jobs would be lost as a result of RBOC alliances with foreign switch manufacturers.

S. 1981's proposed safeguard provisions would not prevent the BOCs from establishing relationships with foreign suppliers which threaten to reduce domestic employment, allow foreign manufacturers to increase their market share and their profits at the expense of U.S. firms, and hand foreign suppliers a leading role in the evolution of technology critical to the future of the telecommunications infrastructure in the United States.

Permitting the Bell operating companies to enter the telecom manufacturing business would inevitably lead to a return of the same types of practices which serve to limit competition, innovation, efficiency, and growth within the domestic telecom equipment industry prior to divestiture.

Elimination or substantial modification of the manufacturing restriction would also undermine the increasingly cooperative relationship between the BOCs and the supplier community that has emerged since divestiture, as described in Mr. Birck's testimony, which has yielded substantial benefits to the BOCs, their suppliers, and the American economy as a whole.

Regulatory safeguards simply cannot be as effective in ensuring a fully competitive, efficient, dynamic equipment industry in the U.S., as the structural approach embodied in the MFJ.

TIA urges the subcommittee to carefully consider the substantial risks to competition, ratepayers, and the competitiveness of the U.S. telecom equipment industry, the potentially enormous cost, both direct and indirect, of relying on regulation to constrain the RBOCs, as well as the tremendous industry growth and other economic benefits which the MFJ has produced in determining whether removal of the MFJ manufacturing restriction would serve the national interest.

TIA submits that once all these factors are taken into account, the answer is clear that the restrictions should be retained.

Again, thank you for the opportunity to appear before the subcommittee. I would be pleased to answer any questions you may have.

[The statement follows:]

STATEMENT OF MICHAEL J. BIRCH, VICE-CHAIRMAN, TELECOMMUNICATIONS INDUSTRY ASSN.

Mr. Chairman and Members of the Subcommittee:

My name is Michael Birck. I am the current Vice-Chairman of the Telecommunications Industry Association, a national trade association whose membership includes over 500 manufacturers and suppliers of all types of telecommunications equipment and related products. TIA's members are located throughout the United States, and collectively provide the bulk of the physical plant and associated products and services used to support and improve the U.S. telecommunications network. In addition, TIA members are involved on an ever-increasing basis in providing telecommunications equipment and services in other developed and developing nations around the world.

I am also President and Chief Executive Officer of Tellabs, Inc. of Lisle, Illinois, a manufacturer of high-technology telecommunications equipment for sale to local telephone companies, interexchange carriers and other telecommunications providers, as well as private users. Tellabs was founded in 1975. Today it is a public company with over 2,000 employees and annual sales for 1989 of approximately $181 million.

I appreciate the opportunity to appear before the Subcommittee to convey to you TIA's views concerning S.1981 and the important public policy issues raised by this legislation and other proposals which would remove or substantially modify the manufacturing "line of business" restriction imposed on the divested Bell Operating Companies (BOCs) under the terms of the Modification of Final Judgment (MFJ), the consent decree entered in 1982, in settlement of the government's antitrust suit against the pre-divestiture Bell System.

At the outset, let me emphasize that TIA supports Congressional efforts to ensure that the line of business constraints contained in the MFJ remain consistent with our national interest. TIA also supports S.1981's stated goal of enhancing this nation's industrial competitiveness. However, while Congress has both the right and the responsibility to review and, where necessary, alter the current legal and regulatory framework to further the national interest, TIA continues to believe that removal or substantial modification of the MFJ manufacturing restriction at this time would have a significant adverse impact on competition, innovation, consumer welfare, and the competitiveness of the U.S. equipment industry in domestic and foreign telecommunications markets.

As the recently-released statistical study of the domestic telecom manufacturing industry appended to my statement (Attachment A) vividly demonstrates, the new industry structure which has emerged under the MFJ has made a substantial positive contribution in each of these areas, by creating a more competitive environment which has encouraged efficiency and innovation in telecom equipment markets, thereby facilitating the provision of more advanced telecommunications capabilities to American businesses and consumers. Since divestiture, equipment prices have declined -- in many instances dramatically -- from pre-divestiture levels, the quality of products in all areas has been greatly enhanced, industry research and development expenditures have risen, many new competitors have entered the market, the efficiency and competitiveness of U.S. manufacturers has increased, and there has been a proliferation of new and improved telecommunications products and services.

My own company's experience since the divestiture provides a good illustration of the beneficial impact of the MFJ within the domestic telecom equipment industry. Since 1982, the year the MFJ was approved and entered by the District Court, our business has more than tripled, with annual sales revenue increasing from $57,217,000 in 1982 to $181,280,000 in 1989. Building on the progress it has achieved in developing and marketing state-of-the-art telecommunications products in the U.S., Tellabs is now in the process of expanding its efforts to penetrate telecommunications markets outside the U.S. In 1989, Tellabs international sales rose to $11 million, an increase of 50% over 1988 sales.

This is not to say that success in the post-divestiture marketplace has come easily. A number of companies which did not even exist prior to divestiture have since emerged as viable competitors in U.S. equipment markets. Price and non-price competition, with respect to items such as warranty protection, delivery schedules, and after sales service has been very intense. During the immediate post-divestiture period, prices for products purchased by the BOCs from Western Electric (now AT&T Technology) declined dramatically as the BOCs began to develop alternative sources of supply. For example, prior to divestiture, one of my company's products routinely used by local telephone companies sold for just under $1300 per circuit. By 1986, the price for this product, which had been significantly improved in the interim, was approximately $650 per circuit. The more open, dynamic marketplace which has emerged under the MFJ continues to exert enormous downward pressure on prices, forcing manufacturers to make maximum effort to control costs for existing and newly-introduced products. Digital cross-connect equipment which Tellabs introduced in 1985, at a list price of $1,800, is currently marketed at a discounted price of just under $700; a similar product which originally sold for $2,175 is now priced at just under $900. Moreover, both of these products have been significantly upgraded to provide increased functionality.

To succeed in the highly competitive post-divestiture environment, U.S. manufacturers have had to become increasingly efficient, innovative, and quality-conscious. However, for those firms willing and able to respond to the challenge, the MFJ has provided tremendous opportunities for growth, by creating a new industry structure in which all manufacturers are able to compete on the merits of their products for sales to the BOCs and other potential customers.

The increased opportunities, and challenges, arising from the new, more competitive industry structure spawned by the MFJ have provided Tellabs and other U.S. manufacturers with strong incentives to improve and expand their research and development programs. Since the MFJ was adopted, Tellabs has increased its annual R&D commitment from $3,697,000 (or 6.45% of total sales) in 1982 to $23,663,000 (approximately 13% of total sales) in 1989. As the attached study shows, the telecom equipment industry's overall expenditures on R&D have also grown substantially under the MFJ. This increased commitment to the development of new and improved telecommunications technology clearly has paid significant dividends, with U.S. factory shipments increasing dramatically from $36.0 billion in 1980 to $74.2 billion in 1988, despite price reductions in all major product areas.

Under the MFJ, the BOCs continue to play a leading role in the evolution of telecommunications technology and the advancement of our nation's telecommunications infrastructure. The MFJ permits the BOCs themselves to engage in basic and applied research into new technologies which may lead to improvements in telecommunications, as well as network and systems engineering, and a broad range of software development activities. They are also actively involved in the development of performance criteria and other generic specifications which manufacturers must meet in order to satisfy the BOCs' equipment needs. As the largest domestic purchasers of telecommunications equipment, each of the regional Bell Operating Companies (RBOCs) provides substantial support for the R&D programs of an increasingly diverse collection of small, medium and large businesses engaged in manufacturing an ever-expanding array of products designed to meet the increasingly diverse needs of the BOCs and their customers. Moreover, because they are precluded from telecom manufacturing themselves, the BOCs' overriding incentive is to make their purchasing decisions on the basis of the cost and quality of the product, rather than the corporate affiliation of the supplier.

In short, the more open, dynamic environment created by the MFJ has yielded significant growth, reduced prices, and increased innovation throughout the U.S. equipment industry, producing substantial benefits to American businesses, consumers, and our economy as a whole. The opportunity to compete for sales to the divested BOCs, the largest purchasers of telecommunications equipment in the industry, has encouraged increased capital investment in efficient U.S. manufacturers who have at long last been afforded access to the Bell market, as well as a host of promising new "start-up" enterprises which did not even exist prior to divestiture. In addition, the emergence of a more open, yet intensely competitive equipment marketplace in the U.S. has forced American manufacturers to become increasingly creative and efficient in meeting the needs of their customers, and therefore, better able to compete both domestically and in overseas markets.

TIA believes that action can and should be taken by the Congress to further enhance the international competitiveness of U.S. manufacturers in telecommunications equipment markets around the world. However, it would be a grave mistake for Congress to view the MFJ manufacturing prohibition as the source of this nation's telecommunications trade deficit, or to conclude that removal of the MFJ prohibition constitutes a viable means of enhancing the global competitiveness of the telecom equipment industry in the U.S.

The origins of the current deficit are complex and include a combination of macroeconomic and sector-specific factors. As the attached study indicates, government trade figures reveal that the bulk of the telecommunication trade deficit relates to "lower end" customer premises equipment, (e.g., telephone handsets, facsimile machines, cordless phones). The rapid growth of imports in this area began well before the divestiture, following implementation by the FCC of its Part 68 equipment registration program. While the more open, competitive marketplace fostered by the MFJ has provided opportunities to foreign, as well as domestic equipment suppliers, the U.S. continues to maintain a trade surplus in network switching and other high-technology telecommunications products. The strength of domestic manufacturers in high-tech telecom equipment markets is reflected in the Commerce Department's 1989 trade figures, which show a $673 million improvement in the overall U.S. balance of trade in telecommunications equipment, despite continued declines in consumer and mass market product categories.

Allowing Bell Operating Company entry into manufacturing is not likely to alleviate the trade deficit or enhance the competitiveness of U.S. manufacturers in domestic or foreign markets. Indeed, it is far more likely to aggravate the present situation, by placing at risk the continued leadership of the U.S. in the most critical sector of the telecom equipment industry, i.e., the markets for advanced network switching equipment and related "high-end" telecom products.

As industry analysts at the Commerce Department and in the private sector have observed, the most predictable effect of removal of the MFJ manufacturing prohibition is the formation of RBOC joint ventures with foreign manufacturers, to the exclusion of U.S. firms, in the strategically significant central office switch market and, potentially, in other product areas as well. According to a March 5, 1990 report in Communications Week (Attachment B) summarizing publicly-available information concerning filings by Bell Communications Research, Inc. ("Bellcore") under the National Cooperative Research Act of 1984, "almost half" of the 34 joint research ventures undertaken by Bellcore since March 1985 have been with foreign companies. A recent Department of Labor staff study focusing on the CO switch market concluded that 18,000-27,000 U.S. jobs ("possibly more, depending upon the RBOCs' behavior") could be lost as a result of RBOC alliances with foreign switch manufacturers. In addition, the formation of such alliances would inevitably result in a major shift in BOC purchases away from domestic manufacturers (who currently supply the vast majority of the RBOC's telecom equipment needs) to the BOCs' foreign partners.

While S.1981 attempts to address these concerns by requiring each "Bell Telephone Company" to "conduct all of its manufacturing activity. . . within the United States" [emphasis added], it is not at all clear that the "domestic production" requirement contained in proposed Section 225(b)(3) would preclude a BOC from entering into commercial arrangements with a foreign manufacturer which would allow the BOC to share in equipment sales revenues derived from the foreign supplier's offshore manufacturing activities, including revenues generated through the BOC's own equipment purchases. Section 225(b)(3) could also be read as permitting a BOC engaged in manufacturing to purchase components developed and manufactured outside the United States for final assembly within the U.S., with very little domestic content contained in the finished product. Moreover, a "domestic production" requirement (which the BOCs have strongly resisted), even if it were tightened to eliminate all possible "loopholes," would not eliminate the potential adverse consequences of BOC joint ventures which would allow foreign-owned manufacturers to increase their market share and their profits at the expense of U.S. firms, through sales to their BOC partners, and hand foreign suppliers a leading role in the evolution of technology critical to the future of the telecommunications infrastructure in the U.S.

Even where the BOCs do not align themselves with foreign interests, renewed foreclosure of domestic equipment markets will make it increasingly difficult for efficient U.S. manufacturers which are not allied with a BOC to obtain the financial support and volume of production they need to compete at home and abroad. In this regard, it is important to recall that it is the independent U.S. manufacturers who were the most aggressive exporters of telecom equipment prior to divestiture. By contrast, the pre-divestiture, integrated AT&T, with its enormous BOC customer base, had only the most limited experience exporting its products, despite its ownership of the largest equipment manufacturer in the world. To the extent that competition in domestic equipment markets is skewed in favor of BOC-affiliated manufacturers, who may well be less efficient and less motivated to aggressively pursue opportunities to compete in foreign markets, the global competitiveness of U.S. industry will be further undermined.

Indeed, the potential adverse impact of allowing BOC entry into manufacturing is likely to be most pronounced for smaller manufacturers, the very group which the BOCs argue would benefit from removal of the MFJ restriction. Many of these firms have proven to be more aggressive, efficient, and innovative than their larger, more well-established rivals, and have grown to a point where they are making a significant contribution to their local economies and to the competitiveness of the U.S. in domestic and foreign equipment markets. Clearly, certain of these firms would be attractive acquisition targets for the RBOCs, and would individually benefit from removal of the MFJ manufacturing prohibition. It is equally clear, however, that those smaller manufacturers and minority-owned firms that are not so favored or that wish to retain their independence will find it far more difficult to survive, notwithstanding the fact that they may be as efficient, or more efficient than BOC-affiliated competitors. A return to closed markets could well be the death knell for all but the chosen few, as investment capital is diverted to the BOCs' preferred suppliers.

In assessing the validity of claims by the RBOCs that removal of the MFJ manufacturing prohibition would yield substantial benefits and would not have adverse effects on competition, ratepayers, and the continued growth and development of the domestic telecom manufacturing industry, it is important to recall the long history of antitrust litigation which led to imposition of the restriction in the first instance. Entry of the MFJ ended more than 30 years of controversy focusing, to a significant extent, on the competitive problems associated with AT&T integration into adjacent, potentially competitive equipment markets. The Justice Department's 1949 antitrust complaint focused almost exclusively on the Bell System's efforts to impede competition in the manufacture and sale of telecommunications equipment. In the 1974 litigation, in private antitrust suits, and in numerous proceedings conducted by state and federal regulators, evidence was presented with respect to the BOCs participation in a broad range of anticompetitive conduct, including biased equipment purchasing practices, discriminatory equipment interconnection requirements, and preferential information disclosure practices, as well as the cross-subsidization of equipment prices from monopoly service revenues.

S.1981, in its current form, would permit the BOCs to become involved in all phases of the manufacturing process, thereby giving them renewed incentives to engage in the very practices which operated to limit competition and inhibit innovation throughout the telecom equipment industry for so many years prior to divestiture. Indeed, more limited proposals which would allow the BOCs to engage "only" in product design and other "pre-production" activities pose grave risks to competition and ratepayer interests. In economic terms, fabrication is the least significant facet of the telecom manufacturing business. Moreover, many of the most significant opportunities for cross-subsidization (e.g., through misallocation of R&D costs) and discrimination (e.g., in access to network-related information critical to the design of telecom equipment) occur before the fabrication process takes place. Nor would limiting BOC involvement to the product design and development phase eliminate the incentive for biased purchasing practices and other behavior designed to favor equipment which embodies or incorporates a BOC's proprietary design specifications.

Even a single RBOC has the ability as well as the incentive to foreclose up to 15% of the U.S. market for many types of equipment, through self-dealing and other forms of anticompetitive behavior. The collective impact of such behavior could result in the foreclosure of more than 70% of the market. Nor can the potential for tacit cooperation or outright collusion among the regional companies be discounted, particularly in light of Bellcore's involvement in activities (e.g., standards development, product testing) which have a substantial impact on the ability of manufacturers and suppliers to design and market equipment to the BOCs.

In an effort to bolster their case for relief, the RBOCs and their supporters have suggested that the MFJ manufacturing restriction, as interpreted by the District Court, prevents the RBOCs from communicating with manufacturers during the product design and development process to ensure that the products which emerge correspond to the BOCs' needs. TIA supports the District Court's decision concerning the scope of the manufacturing prohibition, which was recently affirmed by the Court of Appeals, and does not believe that the Court's order precludes the BOCs from engaging in an ongoing constructive dialogue with their suppliers.

Indeed, one of the principal benefits of the MFJ has been to create an atmosphere in which the Bell Operating Companies have established a more open, cooperative relationship with the entire equipment manufacturing community, which has redounded to the benefit of the BOCs, their suppliers, and the American economy. As the Vice-President of Technology Systems for Bellcore observed in January 1989, in an article appended to my testimony (Attachment C) describing the progress achieved by the industry since divestiture:

> Not only have we solved the immediate problems of divestiture, but we have, as an industry, moved well beyond our immediate post-divestiture circumstances. In particular, we have seen major

> progress towards the opening of the telecommunications marketplace through a free flow of information on architectures, requirements, and interfaces. The response has been an outpouring of products that Bellcore's clients are using to grow and evolve their networks, to provide existing services more economically than heretofore and to provide new services. . .
>
> In January 1984, our supplier database contained 2000 companies; by January 1986, that number had grown to 4850, and now we have 9000 suppliers in our database and 500 shelf feet of supplier information in our library. . . .
>
> The two-way communications that has been established between Bellcore and the telecommunications supplier community is one of the successes of divestiture.

This new relationship has broadened and deepened over time, as the BOCs have become attuned to the benefits of working with a number of vendors to better define their needs and to facilitate the development of products which meet those needs.

In connection with a seminar conducted during Supercomm '89, Bellcore Technology Systems personnel prepared a description of Bellcore's extensive interaction with equipment suppliers in the development of industry standards, in the formulation of generic requirements for products to be purchased by the BOCs, in the context of Bellcore's Technical Analysis program (which "examines the features and capabilities of specific supplier products"), and through Bellcore's Quality Surveillance program. A copy of Bellcore's written presentation is appended to my testimony (Attachment D).

In the standards area, Bellcore's presentation notes that industry standards developed in public standards forums are often incorporated into Bellcore's proposed generic requirements, and specifically cites Bellcore's work "in cooperation with over 50 other companies" in the development of the SONET (Synchronous Optical Network) standard. As a result of this cooperative effort, a standard was developed which "will allow the deployment of multi-supplier equipment, compatible with the present network and able to accommodate future new services."

With regard to the development of generic requirements, which "replace proprietary specifications for interfaces between key elements in the network to help them function no matter what companies make the interfaced elements," the document notes that "suppliers' early involvement and cooperation with Bellcore is critical" to the process. Accordingly, the formulation of Technical Advisories (TAs) articulating Bellcore's preliminary view of proposed requirements normally involves an interactive dialogue with suppliers in the context of a Technology Requirements Industry Forum (TRIF), which is "often followed by more detailed one-on-one discussions between Bellcore and those suppliers interested in exploring technical issues raised by the TAs." As "[o]ne example of the successful close cooperation between Bellcore and suppliers," Bellcore cites its development of proposed requirements for an interface between Test System Controllers (TSCs) and Operations Systems (OS), an effort which involved technical trials conducted with the assistance of two BOCs and two suppliers of TSCs. Following these "experiments," "requirements were refined and Bellcore demonstrated the feasibility of a multi-supplier environment for this technology."

In describing its Technical Analysis program, Bellcore notes that an analysis of a particular supplier's product may be undertaken at the request of a BOC either before or after it has made a purchase decision. The Technical Analysis process, which involves "close cooperation between Bellcore and supplier" during product testing and review, "enhances the supplier's ability to provide the products and services the operating companies are looking for, and it helps operating companies become better informed buyers."

As part of its Quality Surveillance program, Bellcore "looks at a suppliers processes, measurements of specific milestones along the product life cycle, and the 'atmosphere' -- the striving for error prevention -- in the supplier's manufacturing facility," with a view towards "identifying and correcting problems early in the design or manufacturing process." This program also involves "cooperation between Bellcore and supplier at every step," and "may extend to putting a Bellcore representative at the suppliers site."

An article in the December 12, 1989 issue of Communications Week (Attachment E), notes that Bellcore has recently taken steps to promote increased interaction with suppliers, through the use of Multi-Vendor Interaction programs, which Bellcore has initiated to facilitate technology development for the Advanced Intelligent Network and Switched Multimegabit Data Service (SMDS), and through other refinements in its existing procedures designed to initiate interaction between vendors and Bellcore with regard to generic requirements at an earlier stage in the development process. A more recent (February 19, 1990) article in the same publication (Attachment F) describes Bellcore's active participation in the removal of "one of the biggest stumbling blocks in deploying intelligence in the public network" -- *i.e.*, the development of a viable means of connecting two vendors' central office switches to faciliate the transmission of ISDN calls using the new Signalling System 7 functionality -- through the cooperative efforts of Bellcore and the two vendors, AT&T Network Systems and Northern Telecom Inc.

Clearly, continued enhancement of the relationship between Bellcore, the BOCs, and the vendor community at large works to the benefit of all parties. Without question, the ability of Bellcore and the BOCs to serve as "honest brokers", disseminating information concerning the networks which they control to manufacturers on an impartial basis, coupled with their extensive interaction with equipment suppliers -- in the establishment of network standards, in the development of generic specifications, in the technical analysis of products which have been or may be purchased by the BOCs, and in addressing equipment compatibility problems as they arise -- has made the transition to a multi-vendor environment far easier and more productive. To the extent that the relationship between the BOCs and their suppliers can be improved or strengthened, without creating renewed incentives for discrimination among vendors and other anticompetitive behavior, TIA is supportive of such efforts. However, TIA continues to believe that the elimination or substantial modification of the MFJ manufacturing restriction inevitably would undermine the cooperative relationship which has developed between the BOCs and the supplier community under the MFJ, and lead to a renewal of practices which operated to limit competition and stifle innovation in telecom equipment markets prior to divestiture.

To its credit, S.1981 recognizes the need to address the threat to competition and ratepayer interests posed by RBOC entry into manufacturing, and includes provisions which would condition removal of the MFJ restriction on BOC compliance with certain regulatory "safeguards". Should the Subcommittee ultimately determine to proceed with legislation removing or substantially modifying the MFJ manufacturing prohibition, notwithstanding TIA's view that such action is both unnecessary and unwise, TIA would encourage the Subcommittee to further refine and extend the "safeguards" included in S.1981 to include a variety of issues (e.g., dissemination of BOC network and customer-related information, federal/state jurisdictional issues) which are not explicitly addressed in the bill at present. Appended to my testimony (Attachment G) is a description of various "safeguards" issues which should be addressed as part of any effort to configure a comprehensive framework for BOC entry into manufacturing.

However, TIA strongly urges the Subcommittee, in assessing whether removal of the MFJ restriction is appropriate, to carefully consider both the inherent limitations of regulatory "safeguards," no matter how comprehensive or well-crafted they may be, as well as the substantial direct and indirect costs associated with efforts by regulators and private parties to control the potential for anticompetitive practices and other adverse effects arising from BOC entry into manufacturing.

Even with a separate subsidiary requirement, regulatory mechanisms can at best merely constrain to some extent the ability of the BOCs to engage in cross-subsidization or discrimination; they do not eliminate the incentive of the BOCs, once integrated into the competitive equipment manufacturing business, to engage in such behavior. Virtually all of the regulatory devices which are now cited as "safeguards" existed in one form or another prior to divestiture. In the equipment procurement area alone, the FCC conducted a series of proceedings spanning several decades in a vain effort to ensure that independent suppliers were given full and fair opportunity to compete for sales to the BOCs. The dramatic shift in BOC purchasing patterns following divestiture vividly demonstrates the inability of federal and state regulators to prevent discrimination by the BOCs in favor of an affiliated supplier. The recent revelations regarding NYNEX's massive cross-subsidization and discrimination in favor of its procurement subsidiary, Materiel Enterprises, over a four-year period following divestiture, make it clear that the risk of such behavior remains both real and substantial.

By severing the corporate tie between the divested Bell Operating Companies and their affiliated manufacturer (Western Electric, now AT&T Technologies) and prohibiting BOC reintegration into the manufacturing business, the MFJ has sharply reduced, if not wholly eliminated the risks to competition and ratepayer interests which the Justice Department, private litigants, state and federal regulators, and the Congress attempted to contain prior to divestiture. TIA continues to believe that regulatory "safeguards" simply cannot be as effective in ensuring a fully-competitive, efficient, dynamic equipment marketplace as the structural approach embodied in the MFJ.

Beyond the inherent limitations of regulatory mechanisms in general and the significant "safeguards" issues which have yet to be addressed in S.1981, the Subcommittee must also consider the substantial costs of returning to a policy which relies on regulatory mechanisms, together with the threat of antitrust suits initiated by the government and/or private litigants, to protect competition and ratepayer interests. The Justice Department, private litigants, state and federal regulators, and the Bell System expended tremendous resources over many years in a largely unproductive effort to address the competitive problems and other public policy concerns arising from the pre-divestiture AT&T's integration of monopoly local exchange and competitive equipment manufacturing businesses. Without doubt, similarly massive efforts would be required to even attempt to effectively constrain the clear potential for self-dealing and a host of other forms of anticompetitive behavior by the BOCs, upon their reentry into manufacturing.

In this regard, I would note that in recent testimony before the Senate Appropriations Committee's Subcommittee on Commerce, Justice, State, and Judiciary, FCC Chairman Sikes observed that while the Commission's responsibilities increased dramatically during the 1980's, the FCC's budget ("in terms of actual spending power") "shrank by nearly one-third," and the Commission's authorized work force "declined by more than 21 percent." Even assuming that the FCC is now able to make more efficient use of its annual budgetary allotment, it is clear that providing the Commission with the resources necessary to effectively police the interaction of the BOCs, their manufacturing affiliates, and independent vendors would be an exceedingly expensive proposition. Moreover, under the current dual-jurisdictional structure of telecommunications regulation in the U.S., state public utility commissions have an equally vital role to play in protecting competition and ratepayers from BOC procurement abuses and other practices which may adversely affect their separate areas of responsibility. In many, if not most states, regulatory resources are already stretched to the limit, and would require substantial enhancement to enable state regulators to adequately discharge additional telecom-related duties.

It is clear that the total cost of removing the MFJ restrictions on entry by the Bell Operating Companies into manufacturing is potentially enormous. The overall "price tag" for MFJ relief includes not only the direct costs which would be incurred by federal and state regulators, antitrust authorities, and private litigants in their efforts to control anticompetitive behavior by the BOCs; it also includes the more indirect but no less significant costs arising from such practices, which served to sharply reduce the overall efficiency and dynamism of the U.S. equipment industry prior to divestiture. TIA urges the Subcommittee to carefully weigh these costs, along with the tremendous industry growth and other economic benefits which the MFJ has produced, in considering whether it is truly in the national interest to chart a "new" course for the industry which inevitably will lead us once again down an all too familiar and dangerous path.

Finally, to the extent that the underlying purpose of S.1981 is to enhance the global competitiveness of the domestic telecom manufacturing industry, the Subcommittee should further consider whether the public and private resources which would be expended in regulating BOC entry into manufacturing might be put to more productive use in pursuit of this objective. In testimony before other Congressional committees and, more recently, in its response to NTIA's request for comments on the current and future state of the domestic telecommunications infrastructure (Attachment H), TIA has urged the Congress to adopt a comprehensive approach which seeks to preserve the more dynamic and competitive industry structure which has emerged in recent years, while addressing a broad range of issues each of which has a significant impact on the enhancement of our nation's telecommunications resources and the global competitiveness of U.S. industry. TIA's specific recommendations for government action include the following:

-- the continuation of efforts to secure increased opportunities for U.S. equipment manufacturers to compete on a fair and equal basis in foreign telecommunications markets, through bilateral and multilateral negotiations and, where negotiations fail to yield results, through appropriate action under the Omnibus Trade and Competitiveness Act of 1988 and other relevant laws;

-- continued funding of EXIMBANK's Direct and Intermediary Credit programs, with present funding increased if at all possible and blended with "soft" loans from AID to support export initiatives by U.S. firms;

-- revision of export control and licensing policies, with a view towards eliminating unnecessary restrictions which serve to penalize U.S. firms in global competition;

-- adoption of a permanent tax credit for research and development expenditures;

-- amendment of the National Cooperative Research Act to encompass joint production as well as joint research activities under certain circumstances;

-- carefully targeted use of government funds to encourage the formation of consortia for "middle ground" or "generic" technology projects in HDTV and other new technology areas;

-- reintroduction of an investment tax credit and a graduated capital gains tax;

-- adoption of a deficit reduction plan designed to achieve a balanced budget in accordance with Gramm-Rudman-Hollings guidelines, as a means of reducing the cost of capital needed to fund efforts by U.S. manufacturers to expand production and develop new technologies.

Implementation of some or all of the foregoing recommendations would do far more to promote the competitiveness of U.S. businesses in telecommunications and other areas, at far less risk to our nation's economy, than would the adoption of legislation granting the BOCs relief from the MFJ manufacturing restriction, which has served to increase competition, stimulate innovation, expand consumer choice, and facilitate substantial growth and enhanced efficiency throughout the U.S. equipment industry.

Again, thank you for the opportunity to appear before the Subcommittee. I would be pleased to answer any questions you might have.

The CHAIRMAN. Very good. You mentioned "at this time." Inferentially, then, there could be a time later. You say you continue to believe that removal of substantial modification of the MFJ manufacturing restriction at this time would have a significant adverse impact. Now, do you think that later on it perhaps will not, or what is your time frame?

Mr. FRISCHKORN. Well, I would think that a good time frame for elimination of the restriction would be five years after there is effective competition with the RBOC's in the local exchange area.

The CHAIRMAN. Well, you see how the Japanese are buying up $12 billion worth of high-technology firms here in a two-year period. If this trend continues we will have to go over to Tokyo to get it regulated.

Mr. FRISCHKORN. That is not true, senator, as I indicated in my testimony and Mr. Birck indicated in his written testimony. The telecom industry in this country has never been stronger. By every indication we are making progress in all areas of technology, innovation, reducing prices, providing better products and services. In my association we have 530 members. Only about two dozen of those members are foreign-owned companies. There are 6,000—by the Commerce Department's count—companies in this country that produce telecommunications products or distribute telecommunications products. Almost all of those are domestically-owned rather than foreign-owned.

There are some large, foreign-owned manufacturers that are doing business in this country. That is primarily due to the fact that we opened our market with divestiture. However, they have only a small portion of the overall market and in the part of the market that we should be most concerned about—the high technology end—U.S. manufacturers are still dominant.

The CHAIRMAN. Senator Packwood?

Senator PACKWOOD. Mr. Wade, you cited the articles from "Business Week" and "New York Times" of an innovative process in this country, and the walls that you referred to. Explain to me why, in the Bell operating company, this is a problem. I did not quite follow what you were saying.

Mr. WADE. The proposal of S. 1981 has the manufacturers—the manufacturing opportunity for us—in a separate subsidiary with a lot of walls built around it. What we have found in our industry, and what Americans have found, that the Japanese evidently knew a long time ago, is that we need to work very closely with our customers, and my customer is the telephone company, the people that understand the needs—the service needs—of the end user customers, and so we need a very close relationship.

Separate subsidiary rules, arbitrary rules that put walls between us and the manufacturer/fabricator, or us and then our customers, make it extremely difficult for us to interact and build the right product at the right cost for our customers, so from an R&D standpoint, and that is the area I am involved with, we do not want any artificial barriers because we believe that will slow down innovativeness and our ability to meet the needs of the customer.

I do not do basic research. I do R&D for our customers, and I need access to those customers to test prototypes, to test everything we do. I do not want to build something that will not be used or could be costly and not be used.

Senator PACKWOOD. At the moment you literally cannot talk to them? You cannot say, what is it you want?

Mr. WADE. Today I can. Today I can talk to customers. I cannot talk to manufacturers today. We can do it very generically, but we cannot specifically work with General Hilsman or other companies and help them design a product. That is deemed as manufacturing, that we cannot do today, and we do not want that line drawn.

Senator PACKWOOD. Even though you are not doing it, though? Even though General Hilsman is doing it, you cannot talk to him and say General, I think if we were to sit down together we think this is the way the shunt ought to work, or this is the way the switch ought to work? You cannot do that?

Mr. WADE. That is true. We dealt with a very small manufacturer in Texas—Concept Communications—that had an idea of compressed video that we wanted to use in our rural areas for distance learning and medical applications.

Well, their product—and I happen to have their circuit board here—does not work very well with our network. We think we know how to make it work well, but we cannot share that information with them, senator, to get that job done.

We want to work with General Hilsman, we want to work with Miss Biddle's companies to get that job done, and we have a wall there today.

Senator PACKWOOD. Thank you. No other questions, Mr. Chairman.

The CHAIRMAN. Did you have a comment, Mr. Frischkorn?

Mr. FRISCHKORN. I did want to comment on Mr. Wade's answer. It is not entirely true that the RBOCs cannot talk to their suppliers. They can and do. I think there is some concern among the RBOCs that the MFJ restrictions may put somewhat of a damper on that communication, but I think that is primarily because they have not pushed the limits of the restriction.

I just want to quote something that we have attached to our testimony. This is a quote from Frederick T. Andrews, Vice President, Technology Systems of Bellcore. Bellcore is the R&D arm of the Bell operating companies. He says as follows: "“The two-way communication that has been established between Bellcore and the telecommunications supplier community is one of the successes of divestiture.

Ms. **Biddle**. Excuse me, I would like to challenge that. The presidents of a number of our member companies have told us time and time again that they have been foreclosed from specific business opportunities they thought they could bring to one or more of the RBOCs, not necessarily because of what the decree may say but because of the interpretation of the decree and fear of stepping over the line.

It is very easy to say you have not pushed the limits of the decree, but when there are criminal penalties involved in pushing those limits, that is a very risky thing to do and prudent businessmen do not do it.

We have had the experience of discussing with a number of leading antitrust attorneys in and around the industry specifically where that line that Judge Greene perceives between close collaboration with your suppliers and the design of specific products is. We have not been able to get anything like a consistent answer. That has a very chilling effect on the marketplace and does considerably delay bringing innovative products to the marketplace.

Mr. **Wade**. If I could just follow that Mr. Chairman, and I do not mean to belabor this, but one comment. In technology, we continue to try to draw these lines. As Miss Biddle said, it is impossible. Technology is moving all the time. In reference to pressing the limits, I have some people that are very innovative and I hope I can contribute to their innovativeness. I am a technologist. I would prefer to spend my time there than in the court, pressing the limits. I do not want to do that.

The **Chairman**. General Hilsman?

General **Hilsman**. Could I respond, also, Mr. Chairman?

I want to respond at two levels, first at the generic level. When I was Commanding General of the Army's Communications Lab at Fort Monmouth we had just this kind of an issue. Engineers like to invent things that they think are the right things, and we actually did a reorganization in the Army against that issue, and we established this other organization called TRADOC, which is down your way, to involve the user in the field at the earliest time, otherwise you just waste so much money inventing something nobody wants, and so I come very, very strong also, from my own experience, in that need to marry the user, who is the telephone company, with the engineers in the very beginnings of bringing that together.

Then I also make the same comment, that I face this issue, and the issue is that the Bell operating companies, afraid of the legal penalties, just do not deal with us, other than in this arm's length way that we have heard. Those are the facts of what is out there today.

The **Chairman**. Miss Biddle?

Ms. **Biddle**. I think that one of the things that makes the telecommunications marketplace unique is that it is terribly technologically complex. What the RBOCs bring to this equation is an enormous understanding of the way their networks operate, and perhaps the best understanding of the needs of their customers, the consumers.

Very few manufacturers of telecommunications equipment have any experience with the end-user of their equipment, and those that do tend not to have very much experience in how networks work. Marrying those two kinds of knowledge provides tremendous benefits.

We believe that this is not equally the case in the fabrication process, however, simply because the RBOCs have very little, if anything, to bring to that process. They have no experience in manufacturing because they have never manufactured anything. We do not see how they have any tremendous resource to bring to manufacturing on their own, but the knowledge of their networks and the knowledge of their customers is a tremendous resource, both for their own consumers and for the manufacturer of other's products designed to serve those same consumers.

The CHAIRMAN. Senator Gorton?

Senator GORTON. Mr. Wade, would it be accurate to say you agree 100 percent with the testimony, or at least with the bottom-line recommendations, of Chairman Sikes?

Mr. WADE. I guess I have not heard all of his recommendations. What I heard today, I would say yes. I have not read his written testimony, however, so I will take that caveat.

Senator GORTON. Support for the bill, but with the two changes—taking off the foreign restrictions and removing some of the separate corporation restrictions?

Mr. WADE. Yes. I would support—I think it was the gentleman from DEC in his testimony that was here, before, who supported fundamentally no restrictions on R&D. On the foreign issue, we need to be able to compete just like everybody else, and relative to fabrication, if there needs to be some issue there, work with the subsidiary or something, we would be happy to work that. So in simplicity, that is what I support.

Senator GORTON. You have spoken in the abstract of the frustrations you run up against. With respect to your own laboratory, can you give me a specific instance of research which you have done and have neither been able to utilize yourself, fully, or share sufficiently with other manufacturers, and have just run into frustration as a result?

Mr. WADE. There have been many, but I will give you just a couple very quickly, Senator. One is in the Bellingham trial I alluded to, where as I said we have been able to work with our customers and through applications software, which we can do, we were able to drive our service set-up times down to 15 minutes. But we also want to do some voice response work, so our customers can utilize voice response technology. But we found that the only way we can do that economically is in firmware, which is software embedded in hardware, and we cannot do that. That is prohibited, so we backed off that totally.

We have a similar issue affecting the hearing impaired. Through prescription hearing technology in our central offices individuals could get amplification of certain frequencies on a line that would help them hear. Well again, it is firmware that makes that an economical service to offer. We can do it in software, but that is not economical for us to do. If we can embed that software in a firmware base, we think we can provide a lot of things for our customers that we cannot do now.

Two examples, Senator, but it happens every day, and we go through—in order to even get that far, we involve our lawyers in every step of the process, and that is, as I said, six months on one and then we did it in three weeks. I mean, I guess—and I do not mean to demean the legal profession, but we do not need as much.

Senator GORTON. Thank you. General Hilsman, simply listening superficially to you and to Miss Biddle and to Mr. Frischkorn, you seem to be telling us pretty much the same thing. Perhaps each of you could take a shot at any differences the three of you may have in the precise legislation which you would like us to write.

General HILSMAN. Well, as I said, Senator, in my opening remarks, we have—your bill has gone across the entire manufacturing spectrum, from the idea to the research and development to the fabrication.

Senator GORTON. I know how you differ from Mr. Wade. I want to hear how you differ from each other.

General HILSMAN. I stay very tightly focused in the R&D issue. That is where I have been for 37 years. I can bring that expertise to the Committee. I have not been in the fabrication issue. I think that Stephanie and I are pretty much in agreement on the R&D issue, and we have not addressed the fabrication issue, and so we are in agreement, and I am going to have to let Mr. Frischkorn see where he is in disagreement.

Ms. BIDDLE. I would suggest the position that we have taken is a little broader than General Hilman's. I believe that we subscribe to most of the things he has said here today, and certainly to all of his concerns.

We do make a further differentiation, however, which speaks to the source of the funding being either from the unregulated side of the business if the product is to be used in the unregulated side of the business and being able to earn royalties on it; or from the regulated side of the business, if it is to be used in the regulated network and no royalties to be earned from that.

Because we think that incentives are very difficult to overcome, and with all deference to Chairman Sikes in his comments about price caps, the price caps currently under review would deal only with the interstate portion of the RBOC revenues. I would personally have a very different view if we were not living in a rate of return world at all, if it were a world where wherever you made money, you made it, and wherever you lost it, you lost it. But so long as there is some way to gain an economic advantage by cost-shifting, we think it is very, very difficult to justify the money or time spent tracking it.

My understanding of where we differ with Mr. Frischkorn is another matter. I am not sure I see the commonality of view with Mr. Frischkorn's position at all. As I understand it, he does not think anything need be done. I may be overstating that a little, but I have not heard any advocation of change.

We believe that it is critical, at a very minimum, for two things to change immediately: one, to make it very clear, explicitly clear, that there should be no bar on an RBOC talking to a supplier, or potential supplier, in the way any other major business does. We think close collaboration is critical to the development process.

Second, we believe that if it is the desire of this committee, as I believe it is, definitely to spur research and development in this country and to spur the creation of jobs in this country, then we think it is imperative to allow the RBOCs to make investments in other companies' R&D projects and to receive royalties from the success of those products in the marketplace.

Senator GORTON. Do you disagree with that, Mr. Frischkorn?

Mr. FRISCHKORN. Yes. First of all, let me point out that I think all three of us, as I understand the positions, oppose the BOCs getting into classically what is believed to be manufacturing. Mr. Wade was on a panel with me two weeks ago—I do not want to put words in his mouth—but I think he stated that U S WEST was not interested in manufacturing equipment. I think no one up here thinks that the BOCs should be getting into manufacturing like, for example, AT&T. If I am wrong, please correct me.

Second, Ms. Biddle is correct. The TIA position is that no change in the consent decree is necessary. Most of what these gentlemen and Mrs. Biddle would like the BOCs to be able to do can currently be done under the consent decree.

As I mentioned before, there is a waiver process. Note this in response to Mrs. Biddle's comment that the BOCs might face criminal antitrust penalties if they pushed the limits of the consent decree too hard. There is a waiver process before Judge Greene under which the BOCs can ask for a waiver of the various restrictions in the consent decree. If they would aggressively pursue that process, they might find that the decree permits some things that they think they cannot do.

Senator GORTON. Why not clarify that through legislation?

Mr. FRISCHKORN. Well, if your proposal is to codify the consent decree in legislation the way it is now, I wholeheartedly support that.

Ms. BIDDLE. If I might make a comment on the waiver process, we at CCIA were great advocates of the waiver process, and we had great hopes for it. In the last two years, however, we have found that it doesn't work as we had expected. For example, there is a waiver request that I believe was approved by the Department of Justice more than two and a half years ago sitting before Judge Greene on the question of the permissibility of RBOCs investing R&D funds with other firms and earning royalties on the products such firms create. No action has been taken.

Senator GORTON. General Hilsman.

General HILSMAN. May I also clean up something that Mr. Frischkorn said as to what I am and am not. I absolutely agree with the two points Ms. Biddle made, the R&D and the close working relationship. Mr. Frischkorn suggested that I was against the manufacturing, the fabrication. There are about 30 of us who are working together on this, and we are probably split down the middle; therefore, we did not take a position on that, Senator.

What we could get the agreement on were the two points that Ms. Biddle brought up on the research and development and the close working together. So I have not taken the position on the rest of it on fabrication.

The CHAIRMAN. Mr. Wade.

Mr. WADE. If I could just clean up a little bit, too, on what I said. We have no plans today to be a mass manufacturer. We do not have that skill. We would have to build that skill. We do have needs, as I said, Senator, to build very unique products which the manufacturers are not interested in building and which our customers want.

How do you draw the line as to what is and what is not? We have those lines all over the place, and I do not know whether building the prototype is manufacturing, because you have to do some hardware work, or it is not. When you start drawing all those lines, it is extremely difficult.

What I did say is to my knowledge—and I do not make all the business policy decisions of U S WEST. I am a technologist—we have no plans to be a mass producer. We would like to follow our technology. We have some good ideas for our customers and for ourselves. We would like the ability to follow that. We would not like to run up against all these lines and laws and engage the legal profession again.

Senator GORTON. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Packwood.

Senator PACKWOOD. Mr. Wade, is Advanced Technologies U S WEST a full subsidiary of U S WEST?

Mr. WADE. Yes, it is a full legal subsidiary.

Senator PACKWOOD. Are you unregulated in that part of it?

Mr. WADE. Yes. We are subject to regulatory review of the FCC and of our State commissions because we are a cost center and we do provide services for our telephone company. So our books are open. We are audited all the time by the State PUCs. We are audited by the FCC. We are subject to all those rules and regulations even though we are a separate subsidiary.

Senator PACKWOOD. Let me ask you a question which relates to some testimony that Ms. Easterling is going to give, and you may not be the one to answer it. She says most of the RBOCs have hired former AT&T workers who were discarded after divestiture. She represents the CWA and the workers that were at AT&T. The RBOCs have restricted their employment of these ex-telephone wage earners to jobs on the regulated side of these companies. The RBOCs have refused former AT&T workers employment in their unregulated subsidiaries and affiliates.

To the best of your knowledge, do you know if that is true or not?

Mr. WADE. I can only speak, sir, for my entity. We have hired former Bell Labs people. I do not consider them discarded people. I consider them outstanding technologists, and so I have hired non-laid-off Bell Labs people and AT&T people.

Senator PACKWOOD. And some laid-off people, also?

Mr. WADE. Well, some of them, by the way, took their retirement plan. They are in a downsizing mode. They went through an early incentive to retire. I just hired an individual that I think is one of the greatest innovative persons in the world to come work for us, and he was an AT&T person.

Senator PACKWOOD. Thank you.

The CHAIRMAN. Senator Breaux.

Senator BREAUX. Thank you, Mr. Chairman.

Mr. Wade, I noted when you made your statement that you are probably getting more legal advice than you need or want. A series of groans started coming from the lawyers in the audience out there.

Mr. **Wade**. Probably my lawyers.

Senator **Breaux**. Let me ask you, Mr. Wade, if perhaps in general you could tell me from an RBOC perspective if you were involved in manufacturing what would be your market target? What would be your customers? What percentage of your market would be, for instance, other RBOC companies?

Mr. **Wade**. My customer is the U S WEST Telephone Company. It is called U S WEST Communications. It was three telephone companies. They and their end user customers are my customers. I have no plans to serve the other RBOCs.

We also share in ownership of Bellcore, as you are aware, that from an R&D standpoint serves all the regional companies.

My customers are in the 14 states of our territory, and that is my focus.

Senator **Breaux**. Your relationship again with U S WEST?

Mr. **Wade**. We are a subsidiary of U S WEST, owned by the shareowners of U S WEST, that provides R&D——

Senator **Breaux**. So all of your potential market is a company that you are a subsidiary of.

What, if anything, in rules or regulations or this bill would prevent U S WEST from exclusively buying just from its own subsidiary, or do you think there should be anything that does that?

Mr. **Wade**. What I have heard, what Chairman Sikes has said, are there are rules and regulations to my knowledge that we are subject to audit to today relative to the FCC where they are looked at very closely, and we follow those rules.

Senator **Breaux**. An audit is fine, but suppose the audit shows that U S WEST is buying 100 percent of its equipment from its own subsidiary to the exclusion of all other competitors? That is what the audit will show, but then the next step is there is nothing wrong with that in the law.

Should there be?

Mr. **Wade**. I do not need more laws, if that is what you are after, at all.

Senator **Breaux**. So your opinion as a subsidiary of U S WEST, an RBOC company, is that there should be no prohibition on a regulated company buying 100 percent of its equipment from one of its subsidiaries?

Mr. **Wade**. I do not, of course; but there are all sorts of rules and regulations on which Chairman Sikes can elucidate better than I.

The company I serve, by the way, U S WEST Communications, is not forced to do business with me. They buy a lot of services from everybody else because the regulators are after economic service for their customers. We and others try to meet that goal.

Senator **Breaux**. You talked about the walls that are there that prevent dialogue or discussion between the manufacturers and the people who come up with the idea.

If those walls, as you advocate, are knocked down, does that provide a situation where you would be able to sit down with the ultimate purchaser of the equipment and devise plans and specifications which only you as a subsidiary of them would be able to meet and then, in turn, supply 100 percent of the needs of the purchaser?

Mr. **Wade**. Today I can do that. There is no wall today. There is no separate subwall today in that regard. The wall is on the manufacturing side. So I can sit down with our customers today, as can——

Senator **Breaux**. I understand that, but then you carry it to the next step where you would be able to do the manufacturing. Is that all right?

Mr. **Wade**. I think it is all right. I think it is all right for any manufacturer to do that. I am not going to make all the good products. General Hilsman has a product I do not want to make. I want him to have that ability, too.

We have found, by the way, Senator, that by having many suppliers of products versus the old days of one has helped us greatly.

Senator **Breaux**. I appreciate your comments.

Mr. Frischkorn, am I pronouncing it correctly?

Mr. **Frischkorn**. Yes, sir, close enough.

Senator **Breaux**. I think that part of your argument as I hear it is that there is no need to make any changes because we have a trade surplus in the high quality electronics that are being manufactured. We are not being hurt internationally there.

There is a whole series of new companies that are now out there since the breakup of the AT&T/Western Electric situation that are thriving and growing. I do not buy that as an argument as to why an RBOC should not also be allowed to participate. I am glad it is happening. I am glad we are competitive overseas in the high tech stuff. I am glad that everybody is getting into it. We have great innovations. I do not accept that as a reason, however, as to why RBOC should not also be allowed to get into manufacturing and try to do what these other companies have done.

My concern, however, with that argument goes to some of the other things that you did make in your points; that is, the cross-subsidization problems and some of the other things that your summary points out very well. You point to previous practices before the breakup of some of the things that were happening that could happen again.

Now Chairman Sikes apparently does not agree with that argument, and I want to ask you to comment on the following. He says things have changed. The argument you were making was good in pre-1982, but things have changed today. You have now eight separate companies instead of one single entity which was monopolizing the market. They have an international market where before it was only a national market. They talk about a whole array of regulatory tools that the FCC has that would prevent the practices with which you were concerned, and he lists a page and a half of new tools that they have.

His argument is that your second argument holds no water anymore, that it is a different situation. You are talking about pre-1982. Please comment on that.

Mr. **Frischkorn**. It is not a different situation at all. It is the same original situation multiplied times seven.

The problem is that the RBOCs have local exchange monopolies. As long as they have local exchange monopolies, they are going to have the incentive to cross-subsidize and discriminate.

Senator **Breaux**. On that point, would you support then allowing RBOCs to manufacture for other RBOCs outside of their system?

Mr. **Frischkorn**. No. Because of the relationship of the RBOCs to Bellcore, there is still substantial possibility for collision in procurement.

Senator **Breaux**. Even if you eliminate the first part of your argument, you still would not allow them to do it even if they sold to their competitors in other areas?

Mr. **Frischkorn**. No, I would not. If you look around the world, the RBOCs desire to diversify into manufacturing is going against the grain. Around the world there is only one other country where we have a vertically integrated monopoly service provider. In virtually every other country there has been a separation of telecommunications and services and the supply of equipment. This is because structural separation prevents the exact situation that the AT&T consent decree was designed to address—discrimination and cross subsidy.

I wanted to comment on your earlier question to Mr. Wade.

Senator **Breaux**. What about the page and a half of new regulatory tools that Chairman Sikes said did not exist in the old days and which do exist now which will prevent cross-subsidization problems? Are you disregarding improved cost accounting, computer-aided regulation, more private policemen, open network architecture, greater fines of up to $1 million, more State-Federal cooperation, price gaps, antitrust exposure? Are you just willing to say that none of that makes any difference, it is not going to work?

Mr. **Frischkorn**. I think it makes no significant difference. The reason is that the FCC was one-third larger back in the days of AT&T, and they could not uncover any abuses.

Senator **Breaux**. How about two-thirds less efficient?

Mr. **Frischkorn**. Well, there may be some more efficiencies there, but I am not prepared to comment on the efficiency of the FCC today.

The situation again is going to be compounded. AT&T was one company, and now you are going to have seven RBOCs. The FCC staff has been reduced by one-third. In addition, most of the RBOC activity is not regulated by the FCC at all. It is regulated by the State commissions. A lot of those commissions are understaffed.

So I think it is going to be increasingly difficult to oversee RBOC procurement. What all these other countries have seen and what we saw, too, in the context of the AT&T antitrust consent decree, was that structural separation is an absolute bar to cross-subsidy and discrimination—an absolute bar to it. That is the safest way. If you do it any other way, you are relying only on the effectiveness of the regulator.

The last thing I would say in this regard is the FCC has had these tools for several years. We recently had a procurement involving scandal NYNEX. The FCC did not detect that at all. The problem came to light thanks to a whistle blower and newspapers getting involved. All the FCC's regulatory tools were not able to uncover the problem. But for the whistle blower, we would still probably not know about the abuses taking place within the NYNEX internal procurement operation.

The CHAIRMAN. Very good. This has been an outstanding panel. We thank each of you this morning.

We would ask to come forward now Barbara J. Easterling, Executive Vice President of the Communications Workers of America, Gene Kimmelman, Executive Director of the Consumer Federation of America, Albert Kramer, North American Telecommunications Association, and Stuart Brackney, the Director of the Arizona Council for the Hearing Impaired.

We welcome the panel, and the statements that you have submitted will be included in their entireties in the record, and we would ask that you please summarize them. We welcome you.

STATEMENT OF BARBARA J. EASTERLING, EXECUTIVE VICE PRESIDENT, COMMUNICATIONS WORKERS OF AMERICA

Ms. EASTERLING. Thank you. I am Barbara Easterling, the Executive Vice President of the Communications Workers of America. On behalf of the Communications Workers I am pleased to appear here in support of your bill, S. 1981, Senator, which would allow the Bell operating companies to manufacture equipment domestically.

The International Brotherhood of Electrical Workers, also heavily represented in manufacturing of telecommunications equipment, wishes to be associated with our position and our testimony today. Ever since the BOCs manufacturing issue arose several years ago, CWA's position has consistently been that the processes must be conducted domestically. We in this nation have seen far too many jobs exported in many industries now, including telecommunications.

In general, your bill runs in the same direction as H.R. 103, introduced last year by Representative John Bryant of Texas. Both bills create a very positive incentive to the Bell Companies to conduct their manufacturing in the United States.

We might suggest that your legislation include bans on mere "screwdriver" manufacturing, on technology transfer and on "maquiladora"-style operations in Mexico, which have proven so popular among the Fortune 500 and AT&T. We would suggest a rethinking, perhaps, of the requirement in S. 1981 that 10 percent of the manufacturing operations be owned by outside interests because a minority interest shareholder could have an opportunity to retard the operations of such a business and, of course, if the outside owner were foreign, there is the possibility that valuable technology would be compromised without adequate recompense to the majority owner.

While some rather weak arguments against the domestic manufacturing requirement have surfaced—allegedly it would violate some trade agreement concepts—the position of the Congress should be simply that the grant of authority to manufacture will carry certain responsibilities as necessary conditions. Domestic operations are as germane in this context as are requirements to avoid cross-subsidy and predatory pricing and to continue open procurement of equipment.

The AT&T divestiture was an unwise action in that it fully opened the United States market without the necessary trade agreements to secure full cash register ringing access to foreign markets. We know that a sizeable imbalance in the telecommunications equipment trade exists with the latest reliable numbers those of 1988, $3.3 billion in exports versus $5.8 billion in imports.

Both CWA and IBEW firmly believe that legislation to provide rehire rights for ex-Bell system workers should be included in any measure to restructure national telecommunications policy such as S. 1981.

It has been too easily overlooked that the divestiture of the American Telephone and Telegraph still affects people as well as corporations, money, rate schedules, stock certificates and telephone equipment. Since AT&T was pulled apart on January 1, 1984, 150,000 jobs have been lost at that corporation and among the seven regional Bell operating companies. Total employment on the regulated side of the RBOCs has dropped by about 50,000 since 1984 when these companies were established. Lest we forget, every 1 percent of unemployment costs our national government more than $30 billion in lost revenues and in income maintenance expenditures.

Bearing this in mind, IBEW and CWA urges members of the committee to include language similar to that contained in the draft proposal to reform telecommunications policy that was unveiled by the House Telecommunications Subcommittee on February 9. The employee protection language in that proposal is consistent with longstanding legislative precedents approved by Congress to assist workers adversely affected by changes in the structure of their industries. We are on record as supporting the staff draft as it is written.

Finally, I would be remiss if I did not mention that CWA has two other major areas of interest in these proceedings, both interrelated: Information services and telephone company entry into cable T.V. The union supports letting the Bell companies provide information services to help the industry accelerate its development. We support the pending cable telco legislation, H.R. 2437 and Senator Gore's bill, S. 1068.

Let me conclude by again commending your position to stand up and to be counted, Senator, with American workers, to in essence say enough is enough by keeping American manufacturing jobs in America through S. 1981. Thank you.

[The statement follows:]

Testimony of Barbara J. Easterling
Executive Vice President, Communications Workers of America
Submitted before the Subcommittee on Communications
Senate Committee on Commerce, Science and Transportation
May 8, 1990

On behalf of the Communications Workers of America (CWA), I am pleased to appear here to discuss your bill, S. 1981, which would allow the Bell Operating Companies (BOCs) to manufacture equipment. Your bill would lift some restrictions imposed by the 1982 consent decree by which the old Bell System was broken up. The International Brotherhood of Electrical Workers (IBEW), also heavily represented in manufacturing of telecommunications equipment, wishes to be associated with our position and testimony here today.

Ever since the BOC manufacturing issue arose several years ago, CWA's position has been that the processes must be conducted domestically. We in this nation have seen far too many jobs exported in many industries, now including telecommunications.

S. 1981 provides for a domestic manufacturing process. In addition, the bill defines the term "manufacture," as originally set out by District Judge Harold H. Greene in December 1987. That definition now has been affirmed by the U.S. Circuit Court of Appeals. We support these aspects of the bill. We have a few suggestions for amendments.

We would suggest a rethinking of the requirement in S. 1981 that 10% of the manufacturing operations be owned by "outside" interests. A minority-interest shareholder could have an opportunity to retard the operations of such a business; if the "outside" owner were foreign, there is the possibility that valuable technology would be compromised without adequate recompense to the majority owner.

We observe that in general your bill runs in the same direction as H.R. 103, introduced last year by Rep. John Bryant of Texas. That legislation also creates a positive incentive to the Bell companies to conduct their manufacturing in the United States. We strongly advocate your legislation include bans on mere "screwdriver" manufacturing, on technology transfer, and on "maquiladora"-style operations in Mexico, which have proven so popular among the Fortune 500.

Some groups in the current debate are attenpting to make the point that research and development processes are not germane to the actual fabrication. I commend for close study the April 30 Business Week article, "A Smarter Way to Manufacture," which details the continuum between R&D and manufacturing beginning from the mind of the designer and ending with the products leaving the plant. The specific processes are "concurrent engineering," which demands close cooperation at all times between the engineers/designers and the producers/fabricators.

We now are hearing some rather weak arguments against the domestic manufacturing requirement; allegedly it would violate some fuzzy trade agreement concepts. The position of the Congress should be simply that the grant of authority to manufacture will carry certain responsibilities as necessary conditions. Domestic operations are as germane in this context as are requirements to avoid cross-subsidy and predatory pricing and to continue "open" procurement of equipment. The AT&T divestiture was an unwise action, in that it fully opened the United States market without the necessary trade agreements to secure full "cash-register-ringing" access to foreign markets.

We are keenly aware that some companies are either openly opposed or will waffle when asked if they will commit to domestic manufacturing and fabrication; their executives will merely state the empty words that they "would prefer" to manufacture within our nation. Some will term a domestic-manufacture requirement "counterproductive" without any logic or reason for that contention. Such off-the-cuff remarks are not sufficient for policymaking in an industry so vital to the United States economy.

We know that a sizeable imbalance in the telecommunications equipment trade exists, with the latest reliable numbers those for 1988 --- $3.3 billion in exports vs. $5.8 billion in imports. We have attempted to make sense of the 1989 figures reported by the Department of Commerce, but have found that the counting system has been radically changed. The reported imports for 1989 were $6.07 billion, meaning only a 4.3% increase over 1988. But given an annual average rate of increase of imports of 30% from 1985 through 1988, coupled with new product categorization methods, we recommend no one on the Committee accept the reported 1989 numbers as showing any kind of improvement. We expect the new reporting system will require perhaps two more years before the data are reliable and useful.

What is very clear is that imported equipment means employment in other nations on equipment that very well could and should be made here. The Congress needs to keep in mind whether sound public policy includes encouragement of further dollar outflow due to telecommunications equipment purchases from overseas. We believe that if a company wants to sell the equipment in the United States, it should be made here. This policy simply mirrors that of Japan, the European Community and others, the several so-called open-procurement agreements notwithstanding.

CWA and IBEW are certainly not the only players in our industry who are public in voicing frustration over our very badly skewed trade policy. Two weeks ago, this Senate Subcommittee received the following paragraph in its company testimony:

> "Now, we're paying a heavy price in the market place and the policy arena. We send trade negotiators to tables around the world. They debate, they cajole, they sign agreements. They come home. They go back and debate some more and sign more agreements. Meanwhile, we wait for our overall trade position to improve."

The witness, on April 25, was John L. Clendenin, Chairman and CEO of BellSouth Corporation. We share his very deep frustration and skepticism on trade policy.

CWA firmly believes that legislation to provide rehire rights for ex-Bell System workers should be included in any measure to restructure national telecommunications policy, such as S. 1981.

It has been too easily overlooked that the divestiture of the American Telephone and Telegraph Company (AT&T) still affects people as well as corporations, money, rate schedules, stock certificates and telephone equipment.

Since AT&T was pulled apart on January 1, 1984, 150,000 jobs have been lost at that corporation and among the seven regional Bell operating companies.

The skilled craftspersons whom AT&T and the RBOCs sidelined after the Bell System was dismembered are, in many cases, the cream of the American workforce. Ironically, many thousands of employees who have been victimized by the upheaval that has taken place in the post-divestiture era were attracted to the telephone industry in the first place because they were imbued with "the spirit of service." In fact, these wage earners were hired because they possessed a positive mental attitude, integrity, technical skills, attentiveness and patience.

Most of the RBOCs have hired former AT&T workers who were discarded after divestiture. But the RBOCs have restricted their employment of these ex-telephone wage earners to jobs on the regulated side of these companies.

The RBOCs have denied former AT&T workers employment in their unregulated subsidiaries and affiliates. In fact, it is these newer entities which are growing the fastest and generating a rapidly increasing percentage of the RBOCs' total revenues.

Since divestiture, the number of jobs in the RBOCs' unregulated subsidiaries and affiliates has increased by 70,000. But when these positions become available, the companies are hiring unproven new recruits off the street, turning their backs on former AT&T employees who helped build, service and maintain the nation's telephone system.

The chief victims of the RBOCs' selective employment process are workers laid off from AT&T manufacturing plants. With a few minor exceptions, the RBOCs have not only refused to hire these ex-wage earners for jobs in their unregulated entities but also have failed to employ them in positions in the regulated carriers.

It is disturbing that at the same time the RBOCs are urging Congress to enact a flexible telecommunications policy those same companies are practicing petrified labor relations policies by excluding former AT&T workers from jobs in their unregulated subsidiaries.

From a different perspective, actions which circumscribe job opportunities for trained telecommunications technicians drain our Federal Treasury. Every one percent of unemployment costs our national government more than $30 billion in lost tax revenues and in income maintenance expenditures.

Along a related line, the United States is squandering the talents of ex-telephone industry wage earners at a time when

America is running a trade deficit in telecommunications equipment in excess of $1 billion. The telephone workforce is an important national resource whose skills are indispensable in restoring the United States' pre-eminence in world trade.

To correct this problem, CWA urges members of the Committee to support legislation to give former nonsupervisory workers who were serving with the Bell System on December 31, 1983 an opportunity to fill available jobs for which they are qualified at AT&T, the regional Bell operating companies and their respective subsidiaries and affiliates before these businesses offer such positions to those who would be new hires.

We are gratified that rehire rights for ex-Bell System wage earners are included in the draft proposal to reform telecommunications policy that was unveiled by the House Telecommunications Subcommittee on February 9. The employee protection language in that proposal is consistent with longstanding legislative precedents approved by Congress to assist workers adversely affected by changes in the structure of their industries. Among such laws are amendments to the Communications Act enacted in 1943 after a merger of telegraph companies threatened job security. In addition, several railroad statutes afford rehire rights to workers whose employment was impacted by federally-mandated changes in the businesses where they earned their living.

The legislative language in the House draft is similar to the provisions that were included in the Telecommunications Employees' Protection Act, a bill that was introduced in the last Congress. That measure was cosponsored by 100 Members of the House of Representatives.

Enactment of legislation to provide rehire rights for ex-Bell System workers would produce jobs with justice for former wage earners who lost their livelihoods after divestiture as the consequence of a government action over which they had no control.

CWA has two other major areas of interest in these proceedings, both interrelated: information services and telephone company entry into cable TV. The union supports letting the Bell companies provide information services, to help the industry accelerate its development. We support amending the 1984 Cable Policy Act to let telephone companies enter the cable TV business, with the necessary safeguards. We believe the time has come for the Congress to act on cable matters, given the conduct of many cable companies since the deregulation taking effect only three years ago -- skyrocketing rates, shrinking of "basic" cable programming packages and other behavior usually ascribed to monopolies. The Congress certainly has heard sufficient complaints on this score. We support the pending cable-telco legislation, H.R. 2437 and S. 1068.

We believe much of the debate now going on is unfortunate and inapposite. Key players in the industry are in effect telling the

Committees of Congress two things: first, that they can see no way of working out the necessary legislative and regulatory protections against the alleged and predicted abuses, and second, that they have no intention whatever of trying to help you work out such new policies. Sometimes this means a party deals itself out of the process entirely.

Recently, President Bahr spoke out with an idea to try to resolve the policy stalemate. He suggested that the President appoint a commission to develop a national telecommunications policy. This body would be broadly representative of the industry and its users, to include the government. It would be partially modeled on the President's Task Force on Communications Policy, formed in August 1967 and headed by Under Secretary of State Eugene V. Rostow. That task force was composed entirely of government officials; his suggestion is to include more than government to broaden the new group's makeup.

One question the commission could explore is whether the United States is No. 2 in the world in its telecommunications industry. FCC Chairman Sikes recently questioned the validity of that contention, chiefly on grounds of the data being used. Since the seven Regional Bell Holding Companies now rank among the largest corporate enterprises in the world --- assets in excess of $20 billion each and growing each year --- it is necessary to get some facts, and perhaps scale back some of the rhetoric. The commission ought to propose ways of reconciling the need to continue an effective form of regulation while allowing the parties to compete fairly. The debates on Capitol Hill over the last 15 years or so have failed to produce more than restatements of contentions. The commission would help develop the necessary transparent codes of conduct to allow companies to do their business in the marketplace, instead of in the regulatory bodies and inevitably in the courts. The commission would be charged with developing the proposals for legislation, regulation and the MFJ court rulings. The new body would have the benefit of numerous studies done over the last decade by the National Telecommunications and Information Administration and the Congress' Office of Technology Assessment, as well as the many industry studies. We believe it is worth a try.

In press reports on Mr. Bahr's commission proposal, the matter unfortunately came across as flatly predicting no chance of common carrier legislation in the balance of the 101st Congress. At the time of the statement, he was looking at the Congressional calendar's realities --- somewhere around 44 working days left in which to move legislation through the necessary Committees and to Senate and House floors.

He was then and now is seeing the necessary consensus for legislation starting to gain momentum. The numerous hearings in 1989 and 1990 appear to be moving the process along well, and perhaps the 101st Congress can prepare a sound record on which to build in 1991. CWA commends the Subcommittee for its positive efforts.

The CHAIRMAN. Thank you very much. Mr. Kimmelman.

Senator PACKWOOD. Excuse me, Mr. Chairman, I have to go to an 11:30 meeting. Could I ask her three questions, and she may get a chance to answer them?

The CHAIRMAN. Fine.

Senator PACKWOOD. One, your statement that the RBOCs, the unregulateds will not hire laid off AT&T, is that as a matter of policy nationwide? They just have set a bar; we will not hire?

Ms. EASTERLING. No, not true, that they have hired many of the laid off workers from AT&T. Those whom they have not hired one of is the Western Electric manufacturing people who have been laid off.

Senator PACKWOOD. And that is a matter of policy? For whatever reason they will not hire Western Electric?

Ms. EASTERLING. I have no idea, but they have not. We cannot place the Western Electric workers.

Senator PACKWOOD. Let me ask you two other questions. Does the legislation that you advocate provide rehire rights for the laid off Bell system workers? Does it give a preference to unionized as opposed to non-union workers?

Ms. EASTERLING. No, it does not. The legislation provides for rehire by seniority. That would be anyone.

Senator PACKWOOD. Would former Western Electric—and these are the ones you referred to—workers who were in the manufacturing side in the telephone equipment and have been laid off since the divestiture, how would they benefit from your proposal?

Ms. EASTERLING. They would be included to be hired by the RBOCs or be eligible to be hired.

Senator PACKWOOD. Thank you, Mr. Chairman.

STATEMENT OF GENE KIMMELMAN, EXECUTIVE DIRECTOR, CONSUMER FEDERATION OF AMERICA

Mr. KIMMELMAN. Thank you, Mr. Chairman. On behalf of the Consumer Federation I appreciate this opportunity to testify this morning on S. 1981.

We oppose S. 1981, Mr. Chairman, not because we disagree with your goals in this legislation, but because of what we believe will be the unintended consequences that would likely result from passage of this legislation, and that would be that local telephone rates for residential consumers would go up, and we would see an actual reduction in domestic competition in telecommunications manufacturing.

The simple fact is that the Bell companies have a local monopoly in basic phone service, and if they manufacture their own equipment or design their own equipment, they can configure their own network however they please, possibly to favor their own equipment. They will have insider information about what their network needs are and in that way they would be able to justify buying from themselves at inflated prices.

Now, can regulation stop this? Senator Breaux raised that question before. Well, it never has before, and we do not see how it could today. Chairman Sikes said this morning that he would have benchmarks at different costs from each of the seven regions, but he also said he has price caps which he has endorsed which eliminate all the detailed cost information that each of the companies have to supply to the FCC. Now, if this is not contradictory, I do not know what is.

Chairman Sikes says that he wants cross-pollination. I do not understand what the difference between cross-pollination and cross-subsidization is. The FCC has abolished the separate subsidiary requirement that is in this legislation and that you, Mr. Chairman, have supported in the past consistently at the commission and that we have supported in the past, and it is hard to imagine that we would see tough enforcement of this type of a rule.

Chairman Sikes said he has developed accounting protections. Well, the GAO looked at the accounting protections of the FCC and said they are and have always been inadequate and maybe they would be able to evaluate each of the seven regions about once every decade. Other supporters like Mr. Wade this morning, at least by my interpretation, have indicated he would like to eliminate the separate subsidiary requirement completely.

But what would we be losing or what are we losing by not letting this monopoly local phone company enter the manufacturing business? Well, as far as I can see, Mr. Chairman, it is not very much. The manufacturing market has been growing more and more competitive. Our public telecommunications network is state-of-the-art. We lead all other nations in infrastructure development and, most importantly, from a consumer perspective our local rates have been falling by separating monopoly and competitive functions under the MFJ. And so why not leave well enough alone.

Now, you, Mr. Chairman, have raised a number of, I think, very important questions related to AT&T, Bell Canada and Northern Telecom and Swedish Telecom and Erickson, and I may not be as deferential nor as wise as the subcommittee chairman is, but I believe there are a number of facts related to this that you may find interesting.

In terms of AT&T manufacturing and buying from itself for its long-distance network we have now and have always had grave concerns about this. We urge the FCC, as I believe you and the rest of your committee did, to maintain a separate subsidiary requirement for AT&T. The commission refused. We urged careful cost analysis and profits regulation of AT&T. The commission has rejected that, moved away from it. It has eliminated all these rules and adopted price caps which we believe allow AT&T to cross-subsidize if they so choose, and we have submitted data to the commission that AT&T's rates may be up to a few billion dollars too high. The commission has rejected all of this for the first time last year.

Under their price cap regime we have seen evening and night, weekend residential long-distance rates go up. These rates always went down, since the breakup of AT&T, but now they are going up. At least, though, consumers can choose another long-distance company if they do not like AT&T's rates, but the Bells are a monopoly in the local market, and we have no choice. Why hurt consumers in the local market just because the FCC has let AT&T overcharge or cross-subsidize in long-distance markets?

Or what about Canada? Mr. Chairman, you raised a good point. Does Bell of Canada cross-subsidize Northern Telecom? Well, if they do so, it does not seem to be in a way to hurt ratepayers because OECD data that we have submitted in our testimony show that local rates in Canada are on average 45 percent lower than they are in the United States and this would make sense because what Canada does through its regulatory system is what the FCC refuses to do: They regulate the profits of the Northern Telecom subsidiary that makes equipment for Bell of Canada and sells it to Bell of Canada, and they require that some of those profits go into the rate base to cover the costs of local service.

Now, if that system that Bell Canada used were applied in the United States, using data from a 1985 Bell of Canada rate case, we would have about $2.5 billion flowing into the rate base to keep local rates down. Maybe if we had this kind of regulation here in this country, we would be very happy to support your bill.

We have got a similar situation in Sweden. Local rates there are less than half on average of what they are here. So, if there are subsidies, we certainly do not know where the money is coming from.

In conclusion, Mr. Chairman, this legislation we believe because of our regulatory inadequacies in this country, carries greater risks to consumers than potential benefits. And the Consumer Federation, therefore, urges you not to lift the manufacturing restriction on the Bell companies.

[The statement follows:]

Consumer Federation of America

Statement of Gene Kimmelman, Legislative Director
Consumer Federation of America
before the Senate Communications Subcommittee
on S.1981
May 9, 1990

Introduction

The Consumer Federation of America (CFA) believes that the current telecommunications industry structure, as established by the Modification of Final Judgement (MFJ), is serving consumers' interest in affordable telephone service and maximum availability of telecommunications services. Since the Bell breakup, long distance competition has grown, more manufacturers are competing to equip the network and users, network gateways are being tested and new information services are being developed as more consumers become computer literate. The MFJ's strictures, by limiting opportunities for competitive ventures to siphon regulated revenues, also enabled regulators to temper local rate increases. Thus the pro-competitive purposes of the AT&T consent decree have reinforced the pre-divestiture Communications Act tradition of promoting affordable basic phone service.[1]

CFA is concerned that Congress not sacrifice the MFJ's consumer benefits in an effort to experiment with other policy

---

[1] The only exception to this consistent, pro-consumer policy tradition is the FCC's decision to transform billions of dollars of long distance charges into local rate increases. See Kimmelman and Cooper, Divestiture Plus Five, CFA, December 1988 at 16-18.

1424 16th Street. N.W., Suite 604 • Washington, D.C. 20036 • (202) 387-6121

objectives. By lifting any of the restrictions placed on the Bell companies by the MFJ, consumers face a significant risk of substantial local rate increases and diminished competition in return for theoretical, vaguely articulated benefits. CFA therefore opposes S.1981, the "Telecommunications Equipment Research and Manufacturing Competition Act of 1989," introduced by Sen. Hollings, because we believe the consumer risks associated with Bell company entry into the equipment manufacturing business far outweigh potential benefits.

I. Background

The terms of the AT&T breakup are predominantly based on the theory that consumer benefits are maximized if telephone companies providing monopoly services are not allowed to enter competitive markets. For the Bell breakup, this required prohibiting the Bell companies -- providers of monopoly, basic local phone service -- from entering more competitive businesses like interstate long distance, manufacturing and information services.

This consumer-benefit theory is based on the historical anticompetitive practices of the unified Bell System, and the inherent incentives of a company that can maximize profits by overpricing monopoly services and underpricing competitive services. The government's antitrust lawsuit against AT&T included example after example of AT&T taking advantage of its monopoly control of local phone business (i.e. the local "bottleneck") to discriminate against its potential long distance and manufacturing competitors. This anticompetitive behavior, though illegal, made perfect economic sense for a profit-maximizing AT&T: in a network where the same equipment and resources are used to provide monopoly and competitive services, earnings rise when costs are loaded onto local phone service (where the public has no alternative provider and regulation guarantees adequate profit) so that technical aspects of the network and pricing can be manipulated to benefit the local phone companies' unregulated or more competitive ventures. To prevent the "Baby Bell" local phone companies from repeating AT&T's anticompetitive behavior, and reduce Bell company incentives to drive up the price of local phone service, the MFJ prohibited Bell entry into the potentially competitive businesses that rely on the local monopoly for their survival.

Under the logic of the MFJ, if incentives to overprice local phone service are reduced and the ability to discriminate against potential competitors is eliminated, consumers should receive maximum benefits from the telecommunications market. In the concrete terms of the MFJ, this means that competition in the long distance, manufacturing and information services market should promote price reductions, higher quality service and the development of new services for consumers without creating new Bell company incentives to raise the price of monopoly, local phone service. Our first six years of experience with the MFJ verify the consumer protection attributes of separating competitive businesses from monopoly ventures; it demonstrates both the consumer benefits of the Bell company restrictions and the dangers of Bell expansion into more competitive markets.

II. The Post-Divestiture Era: The First Six Years

Since the Bell breakup, long distance competition has grown significantly, more manufacturers are competing to provide network equipment and telephones, and new information services are being developed as more consumers become computer literate. Contrary to Bell Company claims, the American decentralized telecommunications marketplace leads the world in infrastructure modernization, network development and cost-effective provision of telecommunications services (see attached comments of CFA and ICA to the National Telecommunication and Information Administration at Appendix A and C). In addition, with restrictions that reduce Bell company incentives to discriminate, the success or failure of businesses that connect to Bell lines has, for the first time in this century, not led to protracted litigation through the filing of new antitrust lawsuits against the Bell companies.

Unfortunately, the Baby Bells have done everything imaginable to circumvent the anti-discrimination and ratepayer-protection goals underlying the MFJ restrictions. Bell company business reorganization into a less regulated holding company structure, petitions to waive the MFJ restrictions, rate increase requests, repricing proposals and deregulation efforts demonstrate a desire to raise the price of monopoly, local phone service and enter more competitive markets without adequate regulatory oversight. While the MFJ restrictions have prevented substantial erosion of consumer protection, aggressive Bell company market strategies have led to the few consumer losses of the last six years.

Following the stable 50-year pre-divestiture era, during which local residential rates declined 60 percent and overall residential bills fell 64 percent (factoring out inflation), consumers were jolted by the new business practices of the divested Bell Operating Companies (BOCs):

* From the announcement of the breakup until two years after divestiture, the Bell companies asked for about $20 billion in rate increases;

* In addition, the BOCs supported FCC efforts to shift about $11 billion of long distance costs into a local "access charge" of $6-8/month per consumer;

* through their new "Regional Holding Company" structure, many of the BOCs began shifting profitable ventures like the Yellow Pages into unregulated subsidiaries to shield profits from the regulatory process;

- Bell company profits began moving far beyond historical levels and defied market conditions, with the Bells earning up to three percentage points higher then the Standard & Poors 400 (compared to AT&T's historical level of two percent below the S&P 400);

- To avoid regulatory scrutiny (which in this case would involve rate reductions), the BOCs have attempted to diversify into everything from real estate to international businesses, seeking reduced regulation, deregulation and attempting to lift the MFJ restrictions. To date, the few state regulatory commissions that have mustered the resources to evaluate the performance of the complicated web of unregulated Bell subsidiaries believe these ventures have lost money. 2

In the last two years, state regulators have caught up with the Bell companies, stopping unprecedented local rate increases and, in some instances reducing rates. Without the MFJ restrictions, it is unlikely that regulators would be able to track the BOCs closely enough to monitor for cross-subsidization and squeeze out excessive charges. Yet rather then let

---

2. NARUC Summary Report on the RHC Investigations, September 18, 1986 at 8.

regulators reestablish the declining cost tradition of our phone network, the Bell companies continue their drive to enter competitive markets (MFJ legislation) and insulate their profits form regulatory scrutiny (price caps and reduced state regulation).

III. Ratepayer Concerns About Lifting the Manufacturing Restriction

Unless new regulatory tools are developed that prevent cross-subsidization like no past or current regulation is able to do, consumers stand to lose more than they could gain from lifting the manufacturing restriction. The hypothetical promises associated with Bell company manufacturing are far overshadowed by the likelihood that regulation can neither protect competition nor prevent the Bell companies from loading excessive costs onto monopoly, basic voice services.

Because the Bell companies continue to possess bottleneck control over monopolistic local service markets, they would have a financial incentive to purchase overpriced network equipment from an affiliated manufacturing operation. Since ratepayers have no alternative provider of local phone service, they would be required to pay excessive local rates to finance the monopoly profits of an unregulated Bell manufacturing operation.

Fear of such overpricing is more than hypothetical. A recent FCC and New York Public Service Commission audit of NYNEX found that both New York Telephone Company and New England Telephone Company purchased equipment and services from an unregulated affiliate (Materiel Enterprises Company) at above-market prices that led to ratepayer overcharges of $118.5 million: "NYNEX violated our affiliate transaction rules and policies by permitting MECO to intentionally overcharge the telcos and by allowing the telcos, in turn, to record most of these overcharges above the line as regulated costs ...."[3] Unless whistleblowers and investigative journalists can always be counted on to publicize cross-subsidization for regulators, as they did in the case of NYNEX, consumers face a significant risk of excessive rate increases if the Bell companies are allowed to make and purchase their own equipment.

Of course the Bell companies claim these risks are far outweighed by the benefit to the U.S. economy of letting them into the manufacturing business. However, CFA cannot find reliable evidence to support the Bell companies' claims.

The American telecommunications equipment manufacturing market has grown substantially since the AT&T breakup. With the Bell companies prohibited from manufacturing and no longer dependent on AT&T, small manufacturers have taken advantage of market openings to gain a significant position in the U.S. economy. According to Small Business Administration data, small American telecommunications equipment manufacturers have grown many times more than large companies, or manufacturers in general, since the breakup.4

---

[3] Review of Affiliate Transactions Between NYNEX's LECs and Material Enterprises, FCC Common Carrier Bureau, Audits Branch, December 29, 1989 at 15.

If the Bell companies were allowed to manufacture and purchase equipment from themselves, they could drive many small manufacturers out of business and generally impede competition in the equipment market. By developing equipment with insider knowledge of their own network growth projections, configuring their networks to make equipment uniquely suited for their specific infrastructure design, and by spreading research and development (or other untraceable) costs into the regulated ratebase, the Bell companies could easily circumvent the most diligent regulatory policing and foreclose major equipment markets from competition.

Given the fact that consumers have been well served by the current telecommunications market structure, and lifting the MFJ's manufacturing restrictions carries substantial risk that local telephone rates would be driven up and competition in the equipment market reduced, CFA opposes S.1981. Unless this legislation is modified to reduce risks to ratepayers and competition, we believe the public interest is better served by leaving the terms of the AT&T breakup intact.

---

4 The Post-Divestiture U.S. Telecommunications Equipment Manufacturing Industry: The Benefits of Competition, IDCMA, NATA and TIA, March 1990 at 18.

The Chairman. Mr. Brackney.

STATEMENT OF STUART R. BRACKNEY, DIRECTOR, ARIZONA COUNCIL FOR THE HEARING IMPAIRED, PHOENIX, AZ

Mr. Brackney. Mr. Chairman and Members of the committee, my name is Stuart Brackney. I am the director of the State agency in Arizona known as the Arizona Council for the Hearing Impaired. I have been the director of that agency for the past 12 years.

I would like to let you know that I do not come here as a representative of an independent telephone company, US West or AT&T or the attorneys that are filling the room today. I come to you as a man who has seen and been trained on the M-1 rifle in the early 1960s and now watch laser technology being used by the military.

I come to you as a man who has watched a two-year old boy being born two years ago and a physician telling me he was healthy through technology.

I also come to you as a failure because two years ago when my 83 year old father passed away with a significant hearing loss, I could not find for him the technology that he needed to communicate on the telephone. Of all the people in the State of Arizona, that was my job.

I come to you today to express a concern about the 250,000 people who have a severe hearing loss in Arizona and over 20 million in this country.

In my written testimony I identify the fact that Alexander Graham Bell, an educator of the deaf, his wife profoundly hearing impaired, was working on some equipment and technology to try to facilitate the communication problems of those afflicted with a hearing loss and almost by accident he ended up with the telephone. Since that time, the hearing impaired have found it extremely difficult to use that magnificent communication device.

I am concerned about the fact that when you look at the demographics of this country and the number of people over the age of 65 that three out of five of those people have a significant hearing loss, a group that is growing every day. They want to keep their jobs as CEOs and attorneys representing the various enterprises here today. They want to keep their jobs working in the legislatures in states and in the U.S. Congress, but somehow technology fails to see that it is important because this group has traditionally been seen as a statistically insignificant target group.

For so long, i.e. four decades, we have seen television being viewed by many. The hearing impaired loved it when we had silent movies because they could read the words on the screen. This body and the House of Representatives saw fit to pass legislation to require the television industry and its technicians to design and develop close caption for the hearing impaired. It did not happen because the industry wanted to do it. Now millions of people are finally figuring out why such people as Johnny Carson might be funny. Interesting.

I come to you today with a concern about this target group because as a statistically insignificant target group oftentimes I find myself arguing in courtrooms about such basic rights as a deaf person having the right to have a sign language interpreter in the courtroom. The local courts would tell me, well, we do not see that many deaf people come in, and we do not have the money to pay for a sign language interpreter, and besides, there are not that many people out there and it is not that important. I respond by saying, excuse me, I think it is a constitutional right so that they can be heard because they might be serving time or pay a fine.

I also remind them that providing that sign language interpreter in a courtroom does not affect one little deaf person but, more so, 12 jurors, two attorneys, a judge and the rest of the community who feel more comfortable by the fact that justice was served.

When I think about telecommunications in this country and about my father and the 250,000 that live just in my state, I had to look around for six months using one staff member in my agency trying to find manufacturers of equipment that would facilitate the communication process. I am still waiting for the final report on all the little brochures and packets by independent and small manufacturers who have put together pieces of equipment that they cannot market. Large companies have not taken the time to put dollars into research and development for, once again, a statistically insignificant target group.

I would propose to this body that the legislation you are considering would enhance their communication skills for the following reason.

As I mentioned, I am not here representing U S WEST or any of the other RBOCs. I keep trying to call them Reeboks, and again I am reminded that that is a sneaker.

Companies like U S WEST show me prescription hearing services that would allow hard of hearing people to use a telephone. Wow. You cannot imagine what that does to people if, in other words, they would be able to, if the companies who want to now do research and put the money into it, literally, no pun intended, reach out and touch somebody, to say hello to a grandchild, to apply for a job, be they 19 or 69. They cannot do that over the telephone if major companies are not going to be allowed to conduct the R&D and then to provide the equipment so that I can communicate and they can communicate with me.

I guess my major concern is that when I listen to the comments made today, there are still people out there who have a quarter in their pocket and want to stop by a pay phone to call somebody, but until these debates rectify the situation and allow major manufacturers to get into the research and development that would enhance the communication skills of people who were born or through illness or injury can no longer do that over the telephone they will not be able to reach out and touch somebody.

I do not presuppose that U S WEST and other RBOCs are going to do this overnight. I would suggest to you that they should be held accountable if such legislation that you are reviewing today is passed to emphasize the research and development for some of the specific target groups who have traditionally been left out because they are statistically insignificant.

The demonstrations that I have seen by U S WEST thrill me, whether they are talking about prescription hearing services or another service, and it is called voice recognition. This body once again saw that it was necessary to enhance its communication skills with the deaf community and the public by passing legislation requiring telecommunication devices for the deaf, the keyboard devices, be placed in Federal offices around the country. That is wonderful. Deaf people now go out and buy this TDD for around $500 to be able to talk on the phone. They can get a very, very, very cheap one for $179 to talk on the phone.

I would propose to you that if continued research in voice recognition and speech synthesis were put together and put into that communicator box and change its name to something like a communicator box that deaf and hard of hearing people would be able to reach out always, anytime, and touch someone with their feelings, their concerns, their anger and their comments.

Mr. Chairman, I appreciate the opportunity to address you and the Members of this committee today. Hopefully the technology that has changed us from M-1 rifles to laser technology on the combat zone will soon allow deaf people and hard of hearing people to communicate with everybody in our society.

Thank you.

[The statement follows:]

STATEMENT OF STUART R. BRACKNEY, DIRECTOR, ARIZONA COUNCIL FOR THE HEARING IMPAIRED

Mr. Chairman and members of the Subcommittee, my name is Stuart R. Brackney. I want to thank you for this opportunity to testify. I am particularly appreciative of Senator McCain's interest in this issue.

I'm here today because the issue before this subcommittee could have a very direct impact on a constituency I'm heavily involved with, namely, the hearing impaired. Since it was established in 1978, I have been Director of the Arizona Council for the Hearing Impaired. As such, I advise the executive and legislative branches of state government on issues of concern to the hearing impaired community. Additionally, I'm the host of "SIGN OUT," a television program for and about the deaf and hard of hearing, seen statewide in Arizona.

My work with the hearing impaired such as establishing a statewide TDD (telecommunications device for the deaf)/voice dual party telephone relay service in Arizona tells me that deaf and hard of hearing people of our country can benefit from technology other than just a hearing aid.

I imagine most of you know that those who use the telephone -- virtually everyone -- owes a debt to the hearing impaired. Alexander Graham Bell's invention of the telephone grew out of experiments he was conducting on hearing. Bell was a teacher of the deaf.

So it's more than a little ironic that his greatest contribution to society is somewhere between difficult and impossible for the hearing impaired to use. The range of difficulty, of course, is in direct proportion to the degree of hearing loss.

A particular problem for the elderly is a condition known as "sensory neural hearing loss." Roughly 60 percent of those over age 60 have trouble hearing high frequencies, which means using the telephone can be extremely frustrating. What happens with high frequency hearing loss is that certain consonants are hard to hear or can't be heard at all. So speech sounds muffled, even unintelligible. Ordinary telephone amplifiers and most hearing aids don't help -- they only make the muffled sounds louder.

So I was very encouraged to learn that U S WEST was working with audiologists on research to help restore this high frequency loss over the telephone network. My understanding is that researchers had found a way to customize a telephone line and restore whatever frequencies an individual has trouble hearing. Apparently it works a lot like prescription eye glasses, only in this instance instead of an optometrist, it's the audiologist that issues the prescription, and instead of taking it to Pearle Vision, you take it to the local phone company and they somehow adjust your phone line to compensate for missing high frequencies.

And it's something that's done to the telephone line -- it doesn't require an expensive piece of equipment hooked to the phone itself.

This would obviously be of enormous benefit to persons with sensory neural hearing loss. It would virtually reconnect them with the world. I say "would be" because evidently U S WEST's work on this promising technology has been either stopped or slowed because it is somehow in violation of the Bell break-up decree. There's a lot of uncertainty over whether this service could be offered without violating the manufacturing restriction of the decree.

This doesn't make sense. The Bell break-up agreement should not be standing in the way of useful services getting to consumers -- especially in this instance. My guess would be that everyone on this panel is close to someone with a hearing impairment. It's a problem that is widespread. There ought not to be rules or agreements that get in the way of finding solutions to the problem.

I understand that the decree does include a waiver process and I am aware that Judge Greene issued a waiver that applies to TDDs -- telecommunications devices for the deaf. The TDD waiver allows for a "live" operator to take teletype messages and relay them, by voice, to a person who is not hearing impaired. Theoretically it would be possible to get a waiver for this so-called prescription phone service, but why is it necessary to go through a process that is likely to be long, drawnout and difficult, and with an uncertain outcome?

And speaking of the TDD waiver, a better, less expensive, faster method of translation would be to do it by machine rather than live operator. Today we're starting to see a lot of promising work being done on speech synthesis. There is computer software that can translate text into computer-generated voice. But it's an expensive application -- you have to have a personal computer and the software -- which puts it beyond the reach of many of my constituents.

There has also been progress recently in voice recognition, translating speech into text. There's still a lot of fundamental work to be done in this area. My understanding is that researchers have just begun to scratch the surface. But the progress to date is encouraging.

Combined with speech synthesis, voice recognition could potentially give my constituents the same kind of direct, universal access by telephone as most people have long enjoyed. This is very important to them. Given a choice, they don't want to be dependent on an operator intermediary.

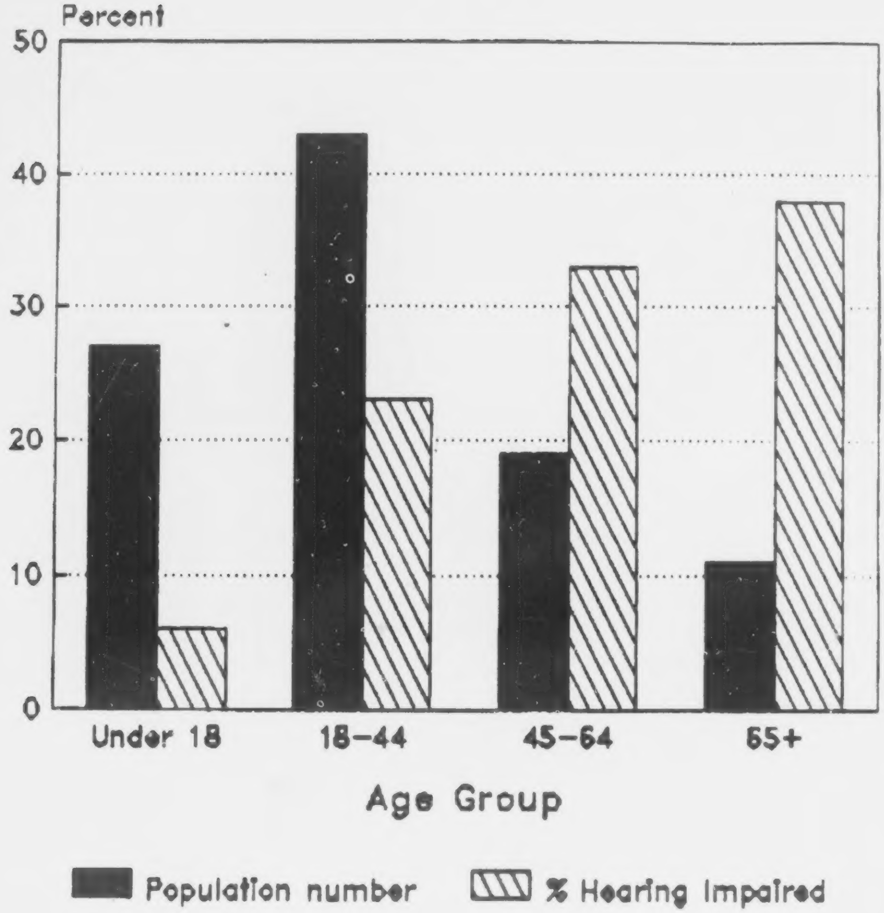
But for these technological breakthroughs to be useful, they're going to have to be affordable. If they require expensive computers and special telephone equipment, they may be the answer for big businesses and the wealthy, but they will not serve the needs of the hearing impaired generally.

Clearly this is work the telephone companies need to be involved in. These promising technologies need to be further developed and then built into the telephone network. For these services to reach the broadest possible audience at a reasonable cost, they need to be part of the network. Software for personal computers is not a viable solution for someone who cannot afford a personal computer.

I understand the break-up decree might also be standing in the way of research in this area by the Regional Bell companies. That needs to be changed.

I urge this committee to advance legislation that would eliminate senseless roadblocks to services that can help the hearing impaired. If the Regional Bell companies are ready to move forward with services in these areas, I urge Congress to clear the road.

Census
1985



Az. Council f/t Hearing Impaired
Nat'l Center for Health Statistics, 1987

The **Chairman**. Thank you, sir.

Mr. Kramer.

STATEMENT OF ALBERT H. KRAMER, GENERAL COUNSEL, NORTH AMERICAN TELECOMMUNICATIONS ASSOCIATION; ACCOMPANIED BY ERIC NELSON, DIRECTOR OF RESEARCH

Mr. **Kramer**. Thank you, Senator. I appreciate the opportunity to be here this morning. I am Albert H. Kramer. I am a partner in the law firm of Wood, Lucksinger & Epstein. I am here today in my role as General Counsel of the North American Telephone Association, NATA. With me is Eric Nelson, Director of Research of NATA.

NATA is a national trade association representing over 650 manufacturers, distributors, retailers and installers principally of leading edge sophisticated customer premises equipment, CPE, for businesses.

The divestiture, Mr. Chairman, capped a 15 year effort to usher in competition and innovation in the CPE industry. As the testimony that we have submitted shows, when all the relevant indicators are reviewed—capital expenditures, funding for research and development, productivity—it is clear that the U.S. telecommunications industry has become more competitive, not less so, since the AT&T divestiture.

A competitive telecommunications industry contributes to American competitiveness in two ways. First, it increases the competitiveness of all U.S. industry. In its productivity-enhancing effects on economic activity, the role of telecommunications today has been likened to the part that railroads played during the industrialization of the United States. Competition has allowed U.S. businesses increasingly to view their telecommunication systems as strategic assets with an important role in reducing costs, increasing revenue and enhancing customer satisfaction, all to improve the American business users' own competitiveness in a global market.

Apart from its effect in improving the competitiveness of all U.S. industries, the competitive state of the American telecommunications industry has improved U.S. competitiveness directly in the telecommunications industry. An impressive reorientation of U.S. producers toward the international marketplace has occurred. According to the United States Department of Commerce, the balance of trade in telecommunications improved by a dramatic $673 million from 1988 to 1989.

Significantly, in the category that includes most of the areas crucial to U.S. industry, such as switching equipment, satellites, mobile communications, fiber optics, data communications and voice processing systems, the trade surplus of $191 million in 1988 has turned into a $1.1 billion surplus in 1989. Moreover, for virtually all of the major trading partners of the United States, U.S. exports are growing faster than imports, including countries with whom the United States has maintained a trade deficit, such as Japan, Hong Kong, South Korea and Taiwan. This new era in telecommunications has been made possible only by fair, effective competition in the marketplace.

It is clear that over all, U.S. competitiveness has benefitted from the AT&T consent decree. Legislation to overturn the decree is not necessary to preserve U.S. competitiveness. On the contrary, while NATA wholeheartedly supports the subcommittee's objective of enhancing American competitiveness, S. 1981 in our view will reverse American competitiveness in all sectors of the economy.

Legislation that removes the decree's manufacturing restriction will detract from the competitiveness directly of the American telecommunications sector. There is no merit to the claims of the RBOCs and their supporters that the trade deficit in telecommunications equipment could be eliminated if only the RBOCs were allowed to manufacture. The entire deficit in this area can be accounted for by consumer and other mass market products. These are not the type of products that have ever been produced in the United States in commercial quantities because they can be produced for so much less in low wage countries.

The RBOCs' entry into manufacturing will not change that. Indeed, in recent testimony before the Senate and House respectively, including today, representatives from Bell South and U.S. WEST have made it clear that their companies would not consider manufacturing low end consumer telecommunications products. Thus, it appears that the RBOCs would be likely to produce only the types of equipment already manufactured here.

On balance, RBOC entry into manufacturing would harm U.S. competitiveness in telecommunications by displacing independent U.S. equipment producers. The outcome would be a dramatic decline in the vitality of the U.S. telecommunication sector as innovative entrepreneurial companies are replaced by companies that are dependent on subsidies, self-dealing and other anticompetitive advantages derived from their monopoly affiliations. These domestic effects would reduce further the international competitiveness of independent U.S. manufacturers who need a strong domestic base to give them the economies of scale and technical experience to compete internationally.

With respect to the broader U.S. economy, the industrial, commercial, financial and service sectors that have become accustomed to and dependent on high quality, low cost, state of the art telecommunications systems, will once again be thrown back upon the vertically integrated telecommunications giants who have little, if any, incentive to improve, innovate and charge competitive prices.

In short, American competitiveness in the broadest sense is inextricably linked to the promotion and preservation of a freely competitive telecommunications marketplace in this country. Because the local exchange monopolies of the seven RBOCs remain intact, the anticompetitive mechanisms of cross-subsidy, discriminatory interconnection and withholding of network information remain available to those companies and would be used to devastating effect if the consent decree manufacturing restrictions were removed at this time. Not only would it have a calamitous effect on American competitiveness, but S. 1981 is also inconsistent with sound antitrust policy.

What, then, can be done, Mr. Chairman? There is one telecommunications arena where the benefits of a competitive market are conspicuously absent, and that is the local exchange network. Competition in the local exchange would bring competitiveness benefits to all telecommunications markets. Not only would we begin to see reduced retail prices for local exchange service, but by driving down the wholesale price of exchange access, local exchange competition will promote further price reductions and increased output for all telecommunications dependent products and services.

All of American industry would benefit from your help, Mr. Chairman, in transforming the local exchange into a true productivity enhancing resource for the United States. This is the surest way to maintain U.S. leadership and competitiveness in telecommunications and information dependent industries.

Thank you, Mr. Chairman. I would be happy to answer any questions.

[The statement follows:]

STATEMENT OF
ALBERT H. KRAMER, GENERAL COUNSEL
NORTH AMERICAN TELECOMMUNICATIONS ASSOCIATION
ON S. 1981
THE TELECOMMUNICATIONS EQUIPMENT RESEARCH AND MANUFACTURING COMPETITION ACT OF 1989

Before the Communications Subcommittee
Committee on Commerce, Science, and Transportation
U.S. Senate

May 9, 1990

I am Albert H. Kramer and I am a partner in the law firm of Wood, Lucksinger & Epstein. I am here today in my role as General Counsel to the North American Telecommunications Association (NATA). NATA is a national trade association representing over 650 manufacturers, distributors, retailers, and installers principally of customer premises equipment (CPE).

This year is our association's 20th anniversary. NATA was formed to fight for the creation of a competitive CPE marketplace, and to ensure that monopoly power was not used to crush fair competition in the equipment industry. We have actively participated before federal and state regulatory commissions, courts, and legislatures in virtually every major proceeding affecting the CPE industry.

The term "CPE" encompasses a wide variety of equipment, ranging from the most sophisticated business telecommunications products, such as voice response systems and ISDN-compatible PBXs, to relatively low-tech, consumer-oriented, mass-market products such as residential telephones and telephone answering machines. NATA's members, which focus almost exclusively on business-oriented CPE, are on the leading edge of technology, offering some of the most advanced business telecommunications equipment in the world.

A competitive CPE market began to develop during the 1970s, when business users became dissatisfied with the limited choices offered them by the Bell System. These users were looking for telecommunications products that could make their businesses more efficient and better able to compete in a marketplace where state and national borders were giving way to increased national and international economic integration.

The Bell System fought the emerging competition in CPE, but the trend was irreversible. Technological advances, especially in electronic components such as the integrated circuit, facilitated entry into the industry by hundreds of innovative, entrepreneurial manufacturers. Until the AT&T divestiture, however, the Bell System still had the overwhelming advantage because its control of the local exchange monopoly could be leveraged into CPE manufacturing.

The divestiture ushered in a new era in competition and innovation in the CPE industry. Promised by the government that they would be safe from monopoly abuses, independent manufacturers accelerated their investment in new product development, each wanting to outdo their competitor. This has been a boon to telecommunications users, as product diversity multiplied and prices decreased. Increasingly, U.S. businesses have come to view their telecommunications systems as strategic assets, with an important role in reducing costs, increasing revenue, and enhancing customer satisfaction -- all to increase the American business user's own competitiveness in a global market.

In its productivity-enhancing effects on economic activity, the role of telecommunications today has been likened to the part that railroads played during the industrialization of the United States. This is clearly an appropriate analogy. Telecommunications innovations are making the world a much smaller place in which to do business. U.S. producers and vendors of CPE are playing a fundamental part in this process. By competing to offer advanced products at reasonable prices, NATA members are helping to improve the competitiveness of all American businesses.

This new era in telecommunications has been made possible only by fair, effective competition in the marketplace. A vertically integrated telecommunications monopoly has little if any incentive to innovate and charge competitive prices. In fact, most experts would argue the reverse.

NATA wholeheartedly supports the Subcommittee's objective of enhancing American competitiveness. However,

S. 1981, in our view, will not advance this objective. First, we disagree with the premise of those supporting S. 1981, that, because of the AT&T divestiture, the American telecommunications industry is becoming less competitive today. The telecommunications equipment industry has been strengthened since the divestiture and is helping, not hurting, American competitiveness in all sectors of the economy.

Second, the bill, if enacted, would not enhance competitiveness and, indeed, would be likely to have the opposite effect. American competitiveness will not be enhanced by providing the means for vertically integrated monopoly power to once again reassert itself over the U.S. telecommunications marketplace. Regional Bell Operating Company (RBOC) market shares would be achieved at the expense of independent U.S. companies, the primary sources of innovation, entrepreneurship and increased productivity in this sector. Finally, the bill does not address the broader issues of the telecommunications marketplace. It appears that this bill would do little more than increase the bottom line of seven particular companies.

The first question this subcommittee should consider is whether U.S. competitiveness has been weakened by divestiture. The answer is no. In analyzing the competitiveness of the U.S. telecommunications equipment industry, it is important to consider all aspects of competitiveness, including capital expenditures, funding for research and development, and productivity. As shown in the attached study (Attachment A),[1] when all relevant indicators are reviewed, it is clear that the U.S. telecommunications equipment industry has become more competitive, not less so, since the AT&T divestiture.

Moreover, as a result of the enhanced competitiveness of the U.S. telecommunications equipment industry, business customers have been offered an explosion of new products and services. A competitive equipment market has provided the impetus for the U.S. telecommunications equipment industry to produce the type of sophisticated products that business users are demanding to enhance their own global competitiveness. Today, for example, with the touch of a button or two, a manufacturers can instantly communicate with suppliers through private networks, enabling the manufacturer to implement just-in-time inventory techniques (a proven inventory management technique that greatly reduces inventory costs and increases competitiveness); with interactive voice response systems, customers can access account records through the telephone keypad for account balance inquiries, payments, etc; and sales clerks can validate credit card purchases through a packet switched value added network. These and other advanced telecommunications offerings would likely not have been offered without divestiture (or at least would have been delayed several years), or would have

---

1/ The attachments referred to were not reproducible.

been available at prohibitive prices. The AT&T divestiture has had a positive impact, not only on the telecommunications equipment industry itself, but on businesses that use telecommunications as well.

With respect to trade in telecommunications equipment, an impressive reorientation of U.S. producers towards the international marketplace has occurred. According to the U.S. Department of Commerce, the balance of trade in telecommunications equipment improved by $673 million from 1988 to 1989. While dramatic, the trend was not wholly unexpected. As shown in the attached table, the trade deficit had begun to level off over the previous few years and in 1989 finally turned the corner. See Attachment B.

The primary equipment category where the trade balance remains negative is the category of consumer and mass market telecommunications products such as telephone instruments (corded and cordless), telephone answering machines, and facsimile terminals. The surge in imports of these consumer and mass-market products began long before divestiture and is much more a function of consumer buying habits and exogenous variables, such as low wage rates in Far Eastern countries, than it is of any domestic actions.

Significantly, in the category that includes most of the areas crucial to U.S. industry, such as switching equipment, satellites, mobile communications, fiber optics, data communications and voice processing systems, the small trade surplus of $191 million in 1988 has turned into a $1.1 billion surplus in 1989 -- an outstanding performance for an industry that some allege is a second and even third rate player in the global telecom arena. Attachment C to this testimony provides a small sampling of 1989 U.S. telecommunications equipment manufacturer successes abroad that illustrate the wide range of products in which American industry is clearly competitive.

Moreover, for virtually all of the major trading partners of the United States, U.S. exports are growing faster than imports (see Attachment D). This trend is especially encouraging for countries with whom the United States has maintained a trade deficit, including Japan, Canada, France, Hong Kong, South Korea, and Taiwan. The general improvement in the trade picture with these countries is due to a variety of factors. The U.S. government has taken a hard stand in negotiations, forcing the Japanese to live up to past agreements and increase market access for U.S. firms. In addition, the United States and Canada implemented an historic Free Trade Arrangement on January 1, 1989 to virtually eliminate trade barriers between the two countries. With other countries such as South Korea and France, the U.S. has been very firm in market-opening trade negotiations. These encouraging trends indicate tremendous opportunities for U.S. producers developing abroad. To take advantage of these opportunities, the U.S.

telecommunications equipment industry must continue to be innovative, efficient, and entrepreneurial. It is precisely these qualities that are thriving in the environment created by the AT&T divestiture.

When all relevant factors are considered, it is clear that overall U.S. competitiveness has benefitted from the AT&T consent decree. Legislation to overturn the decree is not necessary to preserve U.S. competitiveness.

Moreover, legislation that removes the decree's manufacturing restriction would not enhance American competitiveness. For example, there is no merit to the claims of the RBOCs and their supporters that the trade deficit in telecommunications equipment could be eliminated if only the RBOCs were allowed to manufacture. As explained above, the entire deficit in this area can be accounted for by consumer and other mass-market products. These are not the type of products the RBOCs would be likely to manufacture in the United States. Cordless telephones and telephone answering devices -- which account for almost half the imports of consumer products -- have never been produced in the United States in commercial quantities, because they can be produced for so much less in low-wage countries such as Taiwan, Korea, and Singapore. Indeed, in recent testimony before the Senate and House, respectively, representatives from BellSouth and US West made it clear that their companies would not even consider manufacturing low-end consumer telecommunications products. Thus, it appears that they would be likely to produce only the types of equipment that are already manufactured here.

On balance, RBOC entry into manufacturing would harm U.S. competitiveness by displacing independent U.S. equipment producers. Given the anticompetitive advantages that the RBOCs derive from their control of local exchange monopolies, competition in the U.S. market would be reduced as the RBOCs turned inward for equipment purchases rather than rely on competitive bidding, and as independent CPE manufactures were deterred from attempting to compete with entrenched RBOC monopolies. In addition to causing a major dislocation of resources, the outcome would be a dramatic decline in the vitality of the U.S. telecommunications sector, as innovative, entrepreneurial companies were replaced by companies that are dependent on subsidies and other anticompetitive advantages derived from their monopoly affiliations.

These domestic effects would reduce further the international competitiveness of independent U.S. manufacturers, which need a strong domestic base to give them the economies of scale and technical experience to compete internationally. Historically, monopoly-affiliated U.S. equipment manufacturers have not exported successfully. At a minimum, allowing the RBOCs to manufacture would throw uncertainty into an increasingly promising climate and would injure U.S. global competitiveness in telecommunications equipment.[1]

The adverse effects discussed above concern the immediate impact on the competitiveness of the U.S. telecommunications equipment industry. However, American competitiveness in the broadest sense is inextricably linked to the promotion and preservation of a freely competitive telecommunications marketplace in this country. As I mentioned at the beginning of my testimony, the competitive CPE marketplace developed because business users -- in every U.S. industry sector -- wanted products that would make their business as efficient and competitive as possible. They wanted to end their enslavement to products selected _for_ them by the Bell System monopoly.

Since divestiture, the hoped-for benefits of competition in CPE manufacturing have been brought to fruition. However, the local exchange monopolies of the seven RBOCs remain intact, and the anticompetitive mechanisms of cross-subsidy, discriminatory interconnection, and withholding of network information remain available to those companies, and would be used to devastating effect if the consent decree manufacturing restriction were removed at this time.

---

[1] This discussion assumes that Section 225(b)(3) of S. 1981, which requires the RBOCs to conduct their manufacturing in the United States, remains part of any legislation ultimately enacted. Otherwise, the impact on competitiveness would be even worse. The RBOCs have made clear that they want to be able to manufacture abroad for the U.S. market. Studies conducted by both the U.S. Department of Justice and the Department of Commerce have stated that if the RBOCs were allowed to engage in manufacturing, one of the likely consequences would be joint ventures with foreign firms to produce central office switches. This could lead to thousands of American workers losing their jobs.

By allowing reintegration of monopolies and a lessening of competition in the CPE market, S. 1981 would not only harm the competitiveness of the equipment industry. It would harm the competitiveness of all U.S. industries that have come to depend on high-quality, low-cost, state-of-the-art telecommunications products.

Apart from its impact on competitiveness, we believe S. 1981 is inconsistent with sound antitrust policy. This proposed legislation would overturn a crucial provision of an antitrust decree that has allowed an entire new industry to develop. The bill could also affect future enforcement of the antitrust laws against these companies. Antitrust policy alone provides a sufficient reason not to enact S. 1981.

In summary, S. 1981 will not enhance, and is likely to harm, U.S. competitiveness. There are, however, more positive steps that could be taken in this area to promote the competitiveness objective. There is one telecommunications arena where the benefits of a competitive market are conspicuously absent, and that is the local exchange network.

Competition in the local exchange would bring competitiveness benefits to all telecommunications markets. Not only would one begin to see, at long last, reduced retail prices for local exchange service, but there would be spinoff benefits to the other telecommunications sectors -- for example, long distance, equipment, and information services, as well as information-dependent industries such as banking and travel. By driving down the "wholesale" price of exchange access, local exchange competition will promote further price reductions and increased output for all these telecommunications-dependent products and services. This is the surest way to maintain U.S. leadership and competitiveness in telecommunications- and information-dependent industries.

We know from experience that competition reduces prices and spurs innovation, thereby promoting competitiveness, while monopoly has exactly the opposite effect. Given these undisputed facts, we urge the subcommittee to shift its focus, from unleashing monopoly power into already competitive sectors, to opening up monopolies to the forces of competition. American industry as well as the general public needs your help to transform the local exchange into a true productivity-enhancing resource for the United States.

In conclusion, NATA agrees with the overall competitiveness objective of this draft legislation.

Competitiveness and competition, however, go hand in hand. The worst thing this subcommittee could do for U.S. competitiveness would be to reverse the pro-competitive developments fostered by the AT&T consent decree. Rather, the successful policy of opening up markets to competitive forces should be reaffirmed and extended to the local exchange.

WB/RFA/07A.050

The CHAIRMAN. Mr. Kramer, I think the U.S. market for communications equipment is about 25 billion dollars, and much of it is supplied by the Japanese in testimony submitted in the last two years. So when you talk about competitiveness, who is doing the competing? That is what I am worried about.

That competitiveness was dynamic for a while, but now as the market develops, the international market, there has been a major dislocation in resources and the outcome is a dramatic decline in the vitality of the U.S. telecommunications sector and its ability to be innovative and entrepreneurial. The international trade market has stultified the international competitiveness of independent U.S. manufacturers. That is a big issue with our trade representative, with the Congress. We have passed legislation. Other countries promised in the various conferences that they would stop barring U.S. manufacturers from coming into their markets in order to be able to sell and everything else, but you Mr. Kramer find that they are very competitive.

I am wondering where you find all this competitiveness internationally with the domestic manufacturers.

Mr. KRAMER. Mr. Chairman, if the question is where I am finding the international competitiveness of American companies, I am looking at the trade statistics that have been released by the U.S. Department of Commerce. Those statistics show that on the high end of the telecommunications market there have been dramatic improvements in the U.S. position. I cited the statistic of the growth from $191 million to $1.1 billion between 1988 and 1989. That includes all kinds of high end equipment, including equipment that is used extensively by American companies who are manufacturing domestically to increase their competitiveness.

For example, the competitiveness of our telecommunications industry lets companies develop, and increasingly we are seeing companies develop-just-in-time inventory systems. Just-in-time inventory systems cut down on costs and allow you to be more efficient. It means you can export into markets. It means you can move more quickly into market niches. That is improving the competitiveness of not just the American telecommunications industry but all the industries that are telecommunications dependent and can use telecommunications in order to increase their efficiency in international markets.

That is what I am looking at, Senator.

The Chairman. Yet, at the bottom line we have a $2.5 billion deficit in the balance of telecommunications trade, whereas up until 1983 we had a positive balance, not a deficit, in the balance of trade. You are telling me that we are doing grand with that negative balance.

Mr. Kramer. Excuse me, Senator. It is not a question of whether they are doing grand. I am not saying they are doing grand. The question is whether this legislation will cure the deficit problem to which you have alluded.

The answer, which I attempted to point out, is that we do not believe it will. It will not because the deficit exists in the low end of the telecommunications market, the consumer market, answering machines, FAX machines. Those are not areas where the RBOCs are going to be manufacturing. They are not going to help the U.S. balance of trade. That is the point we are trying to make.

If the motivation is to let the RBOCs into manufacturing because it will help the U.S. balance of trade, it will not work. You have heard testimony from two of the RBOCs who have told you they are not going to be in that end of the market.

The Chairman. Well, no one is. That is a given. Where did you get the idea that this bill was going to put them in the low end of the market where nobody is there right this minute?

Mr. Kramer. Senator, I did not——

The Chairman. Did you think I put this bill in to get them into the low end of the market?

Mr. Kramer. The point I am making, Senator, is that if you are worried about addressing the deficit and you want to address the deficit, letting the RBOCs into manufacturing to compete with a segment of the industry that is already highly competitive, that is already generating trade surpluses, that is already contributing to the competitiveness of the whole United States and the whole American economy is not going to help this situation.

In fact, our concern, Senator, for many of the reasons that Mr. Kimmelman expressed, is that you are letting the RBOCs into manufacturing in an environment where they will affirmatively drive out those American companies who are now contributing to the trade surplus that does exist.

Furthermore, you are letting them into the market under the eyes of an FCC. Again, I think Mr. Kimmelman has said this excellently. That is, letting the RBOCs and the telephone companies and the regulated industries do more and more without regulation, including AT&T.

In addition to the catalog that Mr. Kimmelman recited for you, three weeks ago the FCC released a notice of proposed rulemaking. Mr. Chairman, I think this will surprise even you. They released a notice of proposed rulemaking that would allow AT&T to rebundle customer premises equipment with network offerings as an integrated offering.

Now as you know, that flies in the face of the things that we on our side of the table and I know you on your side, Senator, have worked very hard to do, to decouple regulated services from customer premises equipment and from equipment so we could have a competitive environment. This is the same FCC that we are asking now to begin to police the RBOCs and to make sure that the

RBOCs are not cross-subsidizing. That is not going to work, Senator.

The CHAIRMAN. It is sure not working with respect to the foreign companies that are coming in and, like you said, taking all of the American companies and running them all out of business; thousands of jobs have been lost, as Ms. Easterling has testified and much of the worth of U.S. companies has been taken over in the last two years. I do not know that we are working fast enough. We ought to shorten this hearing and report this bill.

Let me ask you, Mr. Kimmelman. I do not get it. In one breath you are saying that you cannot cross-subsidize. Of course, that is what I have been taught. Do not allow them to pad the rates and what have you in order to prosper their manufacturing. Then you end up saying whoopie for Sweden and whoopie for Canada, they have cross-subsidization, and the prices have gone down.

How does that happen?

Mr. KIMMELMAN. Well, Mr. Chairman, I cannot figure out how they are cross-subsidizing if they are. They are not doing it on the backs of the ratepayers. If we can come up with a way of doing that here, that would alleviate my greatest concern.

As I said, in Canada——

The CHAIRMAN. Do you think the manufacturer is subsidizing the common carrier?

Mr. KIMMELMAN. In Canada they are requiring a return from the Northern Telecom subsidiary to Bell Canada to benefit the ratepayers for the cross-subsidies that their regulators believe they cannot catch. As I say, in a 1985 rate case in American dollars on the scale of our Bell companies, it would be $2.5 billion. That is a pretty good deal for ratepayers. That is the kind of regulation that might put a damper on that kind of incentive of a regulated company that gets into manufacturing.

If they are cross-subsidizing, Mr. Chairman, it does not seem to be showing in the local rates, which is what we are concerned about.

The CHAIRMAN. Senator Breaux.

Senator BREAUX. Thank you very much, Mr. Chairman. I thank the panel for their testimony.

Mr. Brackney, I particularly appreciated hearing your testimony. I have no differences with it. I just thought that you spoke very eloquently and certainly from the heart about your feelings on this. I thank you for your presentation very much.

Mr. BRACKNEY. Thank you, sir.

Senator BREAUX. Let me ask Mr Kimmelman, your people will strongly support all these new tools that Chairman Sikes spoke to the committee about in the area of regulatory authority that they have. He listed a page and a half of new authority that I am sure the folks that you represent would strongly support them having, everything from an open network architecture to improved auditing to computer-aided regulation and more private policemen and greater fines, more State-Federal cooperation, antitrust exposure, all of the things that I think the consumer federation would support them having.

Then I guess you are saying it does not work. At least what I am hearing from you is that while we like all those things and we are happy they are there, by golly, none of that is going to make any difference, you cannot police it so do not let them do anything.

I find that a little bit inconsistent.

Mr. KIMMELMAN. Senator Breaux, those list of safeguards are the FCC's conclusions about their tools. We would like to see those tools work the way they say they would. In almost every one of those instances, the tools they have described to you involve weakening of stronger regulatory tools that were in place before, and they have moved very consistently to reduce their oversight of cost, reduce their oversight of profits. They cast it in a positive light, and I wish it worked the way they say it does; but that has not been our experience.

Senator BREAUX. Should we try to make those tools work better, not the position that you have taken to not allow anybody else to come in and try to compete?

Mr. KIMMELMAN. Senator Breaux, I would be totally open to that, but we run into a conflict. We are loathe to ask the Congress to serve as a super regulator and to come in and mandate what usually is the purview of regulators.

Frankly, we do not believe they have been doing what it takes to prevent those local rate increases from cross-subsidization. If the Commerce Committee were inclined to pick precise tools and mandate regulatory action, we would be very happy to cooperate.

Mr. KRAMER. Senator, if I might just add to that. I think Mr. Kimmelman has made a very important point.

All those regulatory safeguards, you have to ask what they replaced. Those accounting guidelines replaced separate subsidiaries. That price cap regulation replaces rate of return regulation. It is dilution of regulation.

Senator BREAUX. I did not mention price caps.

Mr. KRAMER. I am sorry. That was mentioned by Chairman Sikes.

Senator BREAUX. That is why I did not mention it. I knew you would not agree with it.

Mr. KRAMER. All right, we agree on that one.

Senator BREAUX. Let me ask you, Mr. Kimmelman, about the statement on page 7 of your testimony in which you said the Bell companies continue to possess bottleneck control over the monopolistic local service markets. Because of that, they would have a financial incentive to purchase overpriced network equipment from an affiliated manufacturing operation. You continue by saying since the ratepayers have no alternative provider of the local service, they would be required to pay excessive local rates to finance the monopoly profits of the unregulated Bell manufacturing operation.

Now the way I read it, the Chairman's proposed legislation would not allow that to happen in the sense that any of this manufacturing would have to be conducted through a separate subsidiary and that that separate subsidiary would even have to, in fact, go out and raise their money in the marketplace and could not be financed by the parent operation. In addition to all the other things that would be required, I cannot understand how you would say that a company would have a financial incentive to pay more for something than they could buy it at a lesser cost and equal degree of technological capabilities.

Where would they have a financial incentive to pay more for something if they are truly a separate subsidiary as Chairman Hollings' bill would require?

Mr. KIMMELMAN. Senator Breaux, if I am a Bell company and I have a separate subsidiary that manufactures my widgets and I have a requirement to treat everyone equally, I know that my ratepayers can only come to me for local phone service, and when I submit my cost to the regulators they are required by law to cover my cost. So if I can find a way to get those costs up on the regulated side and throw that business for manufacturing equipment to my subsidiary, my subsidiary makes a bigger profit.

They have a bigger markup. I have the costs. I am the regulated company, but I have regulators there who will raise that money for me from ratepayers.

The idea is a very good one. It is hard to make it happen given the market structure the Bells have. They trade as holding companies in the marketplace.

Senator BREAUX. Assuming for the sake of argument that would happen, how would you recommend that the committee would address the problem of an RBOC company not being able to get a rate increase for buying something that they should not have bought that is overpriced?

Mr. KIMMELMAN. Senator Breaux, I think there are two different ways which are drastically opposite but they get to the same thing. One is you can restrict the amount of equipment that they purchase from themselves or anyone through an affiliation to which they are related.

Senator BREAUX. I do not like that. It only says you can buy overpriced equipment in little amounts.

Mr. KIMMELMAN. That may be true, but that——

Senator BREAUX. It does not solve the problem. It is just making it a little less evil, but the evil is still there.

Mr. KIMMELMAN. That is actually true.

The only other way I know is more regulatory, and it requires besides a separate subsidiary of having either State and/or Federal oversight of the entire operation of the subsidiary, including its profits, possibly totally separating out employees. They keep totally separate employment bases.

The bill is good in terms of separate capitalization. My concern is as a holding company they trade as one company, and one subsidiary loses money and another one makes it. It all gets washed out in the books, and no state has jurisdiction outside of State lines. So it would need some enhancing language to explicate what authority State regulators have to look at affiliated transactions and look at profits of those subsidiaries to police.

Senator BREAUX. Is there no way now that a public service commission in establishing a rate for an RBOC company can look at their purchases of equipment and say that it was foolish for you to purchase from A at three times the price you could have bought it from B, and therefore you are not going to get an increase based on that obviously mismanaged practice?

Mr. **Kimmelman**. Senator Breaux, they can look at that. What has happened since the breakup of AT&T is the Bell companies have spun off subsidiaries, often out of state. They purchase from themselves. The regulators ask to look at it. A number of the regulators, particularly in the western region, have complained to both Judge Greene and the FCC that they have not been able to get at the accurate data, so some clarification in that area would be very useful.

Senator **Breaux**. Thank you.

And thank you, Ms. Easterling. We appreciated your testimony.

The **Chairman**. Senator Exon.

Senator **Exon**. Mr. Chairman, thank you very much.

As one member of this committee who has been studying the various proposals in front of us I ask these questions to help me make a determination on which way I should vote on these things, and I frankly have not made up my mind yet. There are some very interesting proposals, and I think there are pros and cons on both sides of this issue. And I think it is a very important measure that we will be addressing on this committee.

Let me start with you, Ms. Easterling, if I might. If the requirement was eliminated from Chairman Hollings bill requiring the Baby Bells to manufacture in the United States or if that provision was significantly weakened, would you and the people in the organization that you represent then oppose the bill?

Ms. **Easterling**. Yes.

Senator **Exon**. Thank you.

Mr. Chairman, those direct answers are very much appreciated, because you save an awful lot of time.

Mr. Kimmelman, I suspect that your answer cannot be as brief as this, and I would not expect it to be. I suspect that you heard the FCC Chairman testify earlier that the FCC indeed could "adequately," whatever that means, prevent cross subsidization from the Baby Bells to their manufacturing facilities, if indeed this bill passes and allows them to do that.

I take it that you have some reservations about that. And I would like to have you make a comment, uncharacteristically for me, not yes or no, but to possibly expand on that somewhat as to what are the pros and cons on that, and why is it that you evidently feel that the FCC would not be in the position to carry out what the Chairman indicated they could?

Mr. **Kimmelman**. Senator Exon, I wish I could agree with Chairman Sikes. I just do not believe that. His approach sounds nice but and it is what I would call mild-mannered deregulation, rather than heavy-handed, which we have seen in the eight previous years.

They have dismantled the main regulatory tools that were used for analyzing costs in transactions within the phone network, and the profits that are earned by the phone companies. They have some fandangled new theories of how to regulate with less oversight, less resources, and claim to get a better result for the public.

But, in fact, it is less oversight and it is less review of transactions. And so we are hard pressed to understand how you can find overpriced equipment purchased by a Bell company from its affiliate in that manner, especially when we have seen in the telecommunications network that costs have been declining. It is a declining cost industry.

One of the most startling facts that few of us know is that during the integrated Bell system, in real dollar terms, because of productivity in the industry, the price of local phone service declined 60 percent in real dollars, and overall phone bills 65 percent in real dollars.

Prices were coming down because we put new equipment in the network. And regulation kept bringing down the price in real dollar terms. The FCC has abandoned all the tools, and not to put words in their mouths, but they have basically said we do not want to regulate too much, and the result is not going to be dramatic rate increases or rates may not double or triple, so do not worry. Well, we think that consumers deserve—ratepayers deserve the best bargain that the cost in the industry justify. And for that you need much tighter regulation.

So we would go back to some of the old regulatory tools. I am startled today that the Chairman of the FCC came in and said he supports this bill. My understanding was he basically wanted to emasculate it by taking away the separate subsidiary requirement. He called it cross-pollination. I do not know how that is different from cross-subsidization.

The concept the FCC is going on is to integrate everything together, allow it to all be combined, and we will just put an overall review of it. At least this legislation is headed in the right direction: it says no, separate out the competitive from the monopoly services. But I frankly am hard pressed to understand how the regulators, with those attitudes, would really carry out the mandate of this bill.

Senator EXON. Did you and the people that you represent oppose or support the deregulation of the telephone industry?

Mr. KIMMELMAN. We supported taking care of doing something about the anti-competitive practices that were alleged against AT&T. And we supported Congress stepping in to make sure that there were structures to prevent that from happening in the future.

We have supported what the Judge did in terms of separating out the local Bells monopoly functions from manufacturing, long distance and information/computer markets. We did not support the divestiture as it occurred. We were hopeful in the early 1980s that Congress would actually pass legislation that would set policy and define ratepayer protections and regulatory protections.

Senator EXON. Well, you are familiar with the fact, are you not, Mr. Kimmelman, that indeed those upon this committee were working towards that end, and I think it was nearly accomplished when all at once the agreement was made and the matter was taken out of our hands. You would have preferred, then, that it be handled in the legislative branch rather than in the judicial branch?

Mr. KIMMELMAN. We preferred a comprehensive update of the Communication Act. And to that extent we still do. We are not opposed to the idea of legislating in this area. We just want to make sure that if we legislate and we replace important structural protections that the court has created, that we replace them with something that is just as strong for consumer protection.

Senator **Exon**. Well, with regard to my previous question, then, are you saying that the FCC could possibly, if it wanted to and was so inclined, could indeed do as the Chairman said it could do, but you question whether or not it has the will?

Mr. **Kimmelman**. That is correct, Senator Exon. I think that we can even enhance that.

I defer to the Chairman on international trade matters. I am not an expert in that area. But if something fishy is going on in Canada and they are taking advantage of us, I would be happy if we had their regulatory tools applied here and use those with the Bell companies. Because their ratepayers are getting a pretty good deal. And if we need to do something else to compete with the Canadians, that is fine by me.

Senator **Exon**. Well, I would just say, and I know the Chairman agrees with me on this, because we have been in the trenches battling this from day one, and that is that it is just not the FCC, but it is the ICC and all of the other federal bureaucracies that most of us felt had a role to play, a key role to play in moving toward degredation, even in a way that most of us could have agreed with.

And then we get into the matter, well, then, how far should we go back to reregulation. I am trying to be realistic in what decisions are being made. We are making some strides I think with the ICC. It seems to be that they have come around better than they did previously with regard to some of the protection that was offered to the public when the Staggers Act was passed.

It is possible that we would be able to do that under the bill that has been drawn by the Chairman with regard to this proposition. And I think it is particularly important that we have the strong language, if this passes, that the Chairman has provided with regard to shipping jobs outside of the United States in this particular area.

Do any of the other two members of the panel have any comments that they would like to add on the two questions that I asked the other two members of the panel?

Mr. **Kramer**. Senator Exon, we have also been concerned, as have some of the consumer groups, with the extent of deregulation. We are not convinced that the FCC would be willing to do the job under any circumstances. Certainly our experience over the last 10 years tells us that it would not be. It was only when Congress intervened and made the FCC do the job that we have seen things happen.

Like Mr. Kimmelman, we believe that there are things Congress could do, and we are not necessarily opposed to Congress legislating in the area. What our concern is, is that if Congress wants to legislate policy, it ought to legislate policy and it ought to know where it is going. This particular piece of legislation we cannot see as helping either American ratepayers, American industry, or American competitiveness.

And I am sure, although I know this is not Senator Hollings' intent, when we finish analyzing this piece of legislation, we see this legislation helping the bottom line of the seven Bell companies and a few special interest manufacturers who would manage to be the chosen few, the fair-haired brides of the Bells.

And those would be the ones who would manage to do well. But the rest of American manufacturing, the competitive sector of the American manufacturing industry would disappear under this legislation. That is our concern.

Senator EXON. Thank you very much.

Mr. Brackney, please go ahead.

Mr. BRACKNEY. Mr. Chairman, Senator, to that point, I think that if the legislation were not passed as exemplified by what is happening in the competitive marketplace, which has been referred to by my colleagues on the left and right, there are no manufacturers out there producing equipment and technology for the target group that I represent. They are not manufacturing it to the point where it can be marketed at a reasonable price that is consumable by the consumer.

It took me six months, as I mentioned in my earlier comments this morning, to find the technology. And in many cases, those companies who were interested in serving that target group, they found that they could not market the equipment broad scale across the country, so they took it off the shelf.

I have hundreds of pamphlets that I get from manufacturers who said we tried it, we could not market it, we could not find the target group or whatever, therefore assistive telecommunications devices for hearing impaired people were pulled off their shelf and off their inventory.

But I also would like to add that were the legislation that has been introduced not passed, then this body might reconsider a traditional approach to solve some of our society's problems. And that would be to do as they did with regards to closed-captioning for the hearing impaired, and that would be to appropriate taxpayers' dollars to fund research projects by universities and whomever, where I would prefer to see the private enterprise, who have expressed an interest in developing this technology, manufacturing it, and who has the ability to market it to the target group that lives in small communities such as my State of Arizona, they cannot find this kind of technology, Senator.

Senator EXON. Just let me give some editorial comment, given the constraints of the desperate budget situation that we have now. I think we could all agree that this is something that would be better handled in the private sector and have a much better chance of being handled than something like you suggest, maybe some money to do research through the government.

Mr. KRAMER. Senator, if I might just respond, because I think that is a critical point. We do believe there are going to be places where the market will not be fully responsive. Let me say that NATA has historically supported every piece of legislation that has come before this body on telecommunications equipment for the disabled and the hearing impaired. And we believe the hearing impaired ought to have telecommunications services.

And as a taxpayer, I would certainly give my tax money for legislation that went to help support that.

The difficulty is, and I think you need to keep your eye on this point, that if the RBOCs are allowed back into manufacturing and we succeed with Senator Hollings' objective of keeping them operating without being cross-subsidized by ratepayers, they will have no more incentive to respond to the specialized needs of the hearing impaired or the handicapped than anybody else if there is no money to be made in it.

The reason they are able to do that now is because they, in essence, are putting the costs of doing that back into the rate base and spreading it across ratepayers. Now if we have specialized needs where we need to put costs into the rate base and spread it back across ratepayers, then we ought to do that.

And again, I want to say NATA did not oppose FCC actions to allow the telephone companies to provide certain services for the hearing impaired and the handicapped out of cross-subsidized ratepayer funds that went to purchase equipment. We do not have difficulty with that.

That is a different policy decision than the decision to think that letting the RBOCs back into manufacturing as non-cross-subsidized entities is somehow going to solve the problem of the hearing impaired and the disabled. It is not. If you succeed in making them insulated from ratepayer funds, they will be driven by same profit motive as the people I represent and as the people Mr. Frischkorn represents. And we would welcome, again, let me say, any congressional intervention that assisted in the problem of the hearing impaired and the disabled. That is not the issue here.

Senator EXON. Thank you.

Mr. KIMMELMAN. Senator Exon, if I could go just a step further, because I agree with you that the taxpayer revenue would be hard to find for this. From the matter of the ratepayer perspective, if we are defining universal service to serve everyone, and I think we should, we need this equipment in the network. We need it for the hearing impaired.

That does not answer the question of who should manufacture it. I think Congress can mandate that that equipment be made available. I think in the Americans With Disabilities Act that you have done some of that. I think Congress can go further, and if it is mandated and it has to be purchased, I am sure there are manufacturers out there who will make it, because then there is a market for it.

We just prefer that you not specify who has to make it.

Senator EXON. I thank the panel, and I thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator.

Mr. Kimmelman, is the Consumer Federation of America engaged in any proceedings at this time before the Federal Communications Commission?

Mr. KIMMELMAN. Numerous, Mr. Chairman.

The CHAIRMAN. Affecting cross-subsidization?

Mr. KIMMELMAN. Yes, sir.

The CHAIRMAN. By whom?

Mr. KIMMELMAN. We have been involved in all of the proceedings that relate to the regulatory requirements of AT&T.

We opposed the elimination of the separate subsidiary requirement for them.

We have opposed the bundling Mr. Kramer indicated has happened before.

We opposed the elimination of the rate of return regulation and regulation of profits and analysis of costs.

We are involved in the same proceeding for the local carriers, including the Bells that would go away from rate of return regulation.

We were involved in the computer inquiry to which Senator Breaux referred before which mandated separate subsidiaries. We supported that, and we opposed the FCC's new cost accounting system.

We are involved in every one of those, Mr. Chairman.

The CHAIRMAN. Very good. We appreciate each of your appearances here this morning. We thank you very much. The committee is indebted to you.

The committee will be in recess subject to the call of the Chair. Thank you.

[Whereupon, at 12:10 p.m., the committee was adjourned, subject to call of the Chair.]

ADDITIONAL ARTICLES, LETTERS, AND STATEMENTS

STATEMENT OF HON. HOWELL HEFLIN, U.S. SENATOR FROM ALABAMA

Mr. Chairman, I commend you for holding hearings regarding telecommunication policy for America. I, along with others, cosponsored a resolution in the first session of this Congress asking for Congress to reassert its power in determining what our national telecommunications policy should be. I am pleased to see that you are moving ahead with this agenda.

In recent years, the telecommunications market has continued to become more competitive and more globally oriented. Japan and Western Europe have announced plans to spend some $200 billion over the next decade to provide digital fiber optic lines to all homes and businesses, France will likely continue to expand their state-of-the-art information system. Even Canada and Singapore have a more clearly defined policy for becoming a world class competitor in this international, high tech market.

Given the increasing importance of and competitiveness in this industry, I believe that Congress must take the lead in establishing a clearly defined telecommunications policy that will serve us well into the 21st century. In that regard, I believe that the several thousand telecommunications experts at the Federal Communications Commission and in the state public services commissions are better equipped to deal with decisions regarding telecommunications regulation that a judge and 2 or 3 clerks in the Federal court system.

I therefore urge the committee to tackle the full scope of issues surrounding America's information age infrastructure. It is essential that our telecommunications industry is able to function in the nation's best long term economic and strategic interest.

STATEMENT OF THE PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

The Public Service Commission of the District of Columbia (D.C. PSC) hereby submits its comments on S. 1981, the "Telecommunications Equipment Research and Manufacturing Competition Act of 1989" (Legislation). The D.C. PSC is opposed to entry by the Bell Operating Companies (BOCs) into manufacturing of telecommunications equipment and the provision of customer premises equipment (CPE), other than that currently permitted. The D.C. PSC submits that the risks associated with BOC entry into these markets outweighs the perceived benefits that may result. Even the requirement of separate subsidiaries as a prerequisite for BOC entry is insufficient, in the opinion of the D.C. PSC, to prevent anticompetitive activities.

BOC manufacturing and BOC provision of CPE should not be allowed in any form, other than that which is permitted currently. In particular, design and development of switching equipment and manufacturing of software pose threats to the public interest. Allowing the BOCs to design and develop equipment could enable the BOCs to hinder the ability of competitors to interconnect with their networks. Such a result would give the BOCs an undue competitive advantage.

Moreover, the use of separate subsidiaries would not be sufficient to prevent anticompetitive practices. For example, in the pre-divestiture period, AT&T still was able to give the products of its separate subsidiary, Western Electric, a competitive advantage over products of other companies. Therefore, while requiring separate subsidiaries is preferable to currently employed nonstructural, cost accounting safeguards, even the use of separate subsidiaries may not guard against anticompetitive practices by the BOCs with regard to preferences for their own subsidiaries' manfactured products.

Further, the D.C. PSC questions whether the Legislation's use of separate subsidiaries can be implemented effectively. Specifically, the Legislation grants to the Federal Communications Commission (FCC) the authority to promulgate regulations to require that the BOCs, that are engaging in permissible manufacturing activities, "provide to other telecommunications equipment manufacturers opportunities to sell such equipment to itself or any of its affiliates which are comparable to the opportunities which it provides to itself or any of its affiliates * * *." Section 225(c)(1). While the intent of the Legislation to assure that other manufacturers have an opportunity to provide network equipment to the BOCs is laudable, it will be, at best, difficult to enforce such regulations. For example, the FCC may have to resolve complaints regarding the BOCs' equipment procurement practices or examine management decisions concerning such procurement. However, the FCC has acknowledged staff shortages and therefore it is unlikely it will be able to handle these matters. Moreover, it is questionable whether, even with aggressive enforcement, the FCC will have access to the information concerning such procurements necessary to determine whether the BOCs are complying with the regulations.

The Legislation also speaks in terms of "comparable opportunities" to sell. The meaning of this term is unclear, again leaving substantial discretion to BOC management over the procurement decisions. Therefore, even though the Legislation proposes separate subsidiaries, concerns similar to those which arose between AT&T and Western Electric may not be eliminated.

Finally, similar concerns are raised by the possibility of BOC provision of CPE, other than that which is permitted currently. The D.C. PSC submits that the current CPE market is robust with multiple providers with the incentive to innovate and create product to meet customer demand. The D.C. PSC, therefore, questions why additional BOC entry is necessary when marketplace forces apparently are working, especially if BOC entry poses risks inimical to the public interest.

AT&T

Randall L. Tobias
Vice Chairman of the Board

295 North Maple Avenue
Basking Ridge NJ 07920
201 221-7800

May 10, 1990

The Honorable Daniel K. Inouye
Chairman, Subcommittee on Communications
Senate Hart Office Building Room 227
Washington, D.C. 20510

Dear Mr. Chairman:

I was delighted to appear before your Subcommittee last week to explain why AT&T opposes legislation to lift the manufacturing injunction in the Bell System Consent Decree. I was also pleased to hear firsthand the testimony of BellSouth and Digital Equipment on S. 1981. As a result of your hearings, I believe we can identify several areas in which the Decree has been claimed by some to be counterproductive, but where it turns out that it is not. The attached paper makes the points that the Decree has not hindered the nation's trade in telecommunications equipment; it has not interfered with the ability of equipment manufacturers to find needed capital; and it does not prevent the Bell companies from interacting closely with their manufacturers. To the extent the Bell companies need to clarify the scope of permissible interaction, we would be pleased to work with them and other manufacturers, under your subcommittee's guidance, to find a common understanding.

It makes no sense to pursue legislation to solve problems that do not exist. In fact, as our paper demonstrates, the real problems would actually come from lifting the injunction, not from retaining it. Regulation would be ineffective against the overwhelming incentives the Bell companies would have to distort the competitive market to their own advantage.

The current industry structure is the right one. It has led to thriving competition and growth in the equipment industry. An array of manufacturers now vie with each other to serve the Bell companies, who are making choices based on which firms offer the best equipment at the best prices. Lifting the injunction would be a vote to let monopoly incentives, rather than competitive forces, again govern the markets. It risks the health of the industry and the continued preeminence of American manufacturing in telecommunications. I appreciate your support for the Decree, and the leadership you have shown on this issue.

Sincerely,

Randy

R. L. Tobias

On April 25 and May 9, 1990, the Senate Subcommittee on Communictions conducted hearings on S. 1981, which would lift the manufacturing injunction in the Bell System Consent Decree. The record demonstrates that the injunction may not be causing the problems that some have claimed, and that lifting it would lead to the risk of serious abuses in the marketplace that regulation could not control.

Changing the Decree would not help the trade deficit in telecommunications equipment, and it might hurt.

One claim that the hearings disproved is that the nation's trade deficit in telecommunications equipment would be helped if the injunction were lifted. BellSouth's Chairman and CEO, Mr. Clendenin, conceded in his answers to questions that there is already a "strong" trade surplus in switching equipment. He acknowledged that the deficit is caused by imports of "low end" equipment -- simple instruments, facsimiles and answering machines -- where overseas manufacture is "just the nature of the low end of the market," as he put it.

Mr. Clendenin's remarks are borne out by the Commerce Department's trade statistics. The trade surplus in network equipment (switching equipment and cable, wire and fiber) was a solid $ 607 million in 1989, up from $ 173 million in 1988. In fact, the overall telecommunications equipment trade picture has improved a good deal in the past year, with the deficit shrinking 27%, from $ 2.6 B in 1988 to $ 1.9 B in 1989. When the deficit caused by "low end" equipment is excluded, we actually find a $ .7 B surplus in the total telecommunications trade balance for 1989.

These facts should dispel any idea that the deficit is in a "free fall", which Mr. Clendenin's written statement claims, or that Bell company manufacturing could help the deficit. Even Mr. Clendenin admits that the Bell companies "cannot single-handedly reverse major international trade patterns." (Clendenin testimony, Attachment A at p. 6). In fact, he testified that his company has no interest in manufacturing the "low end" equipment where the trade problem exists.

By contrast, the United States' current trade surplus in network equipment could end if the Bell companies were to affiliate with foreign firms and self-supply, as the Departments of Commerce and Justice acknowledge is likely. BellSouth's objection to the domestic content conditions in S. 1981 (Clendenin testimony, Attachment A at pp. 5-6) is further evidence that the trade surplus in network equipment (and American jobs) could be in jeopardy if the Decree were altered.

The capital markets already meet the needs of equipment manufacturers.

A second claim now laid to rest is that the Bell companies need to be investment bankers to the rest of the telecommunications industry. The capital markets in the United States are well developed and function efficiently. They attract money from within the country, but because the capital markets are global, they also attract money from without, particularly from Europe and Asia (just as U.S. funds find their way into the overseas capital markets). The real point of BellSouth's story about CXC and IMM (the two firms that sought BellSouth's investment) is this: both CXC and IMM were able to find capital from other sources. That these sources may be foreign does not mean that the capital markets are not functioning well. Indeed, when foreign funds are attracted to this country, it frees domestic capital for other investment. Nor does it mean that the equipment market is stagnating; quite the opposite is true. Since divestiture, the number of manufacturers of telephone and telegraph equipment has grown swiftly -- at a compounded annual rate of 7.1 percent as compared to 1.6 percent for all other manufacturers. (Tobias testimony at p. 9).

As Senator Gorton noted during the hearings, there are many ways that the Bell companies can spend their limited capital -- on upgrading their networks, on increasing shareholder dividends, and on any other undertaking including overseas manufacturing they wish, except for the three areas enjoined by the Decree. Just last month, for instance, U.S. West and four other corporations announced a year-old alliance to develop specialized computer software using concepts derived from artificial intelligence research. (Washington Post, April 25, 1990 at G1). Indeed, AT&T believes that under the Decree, the Bell companies can fund the design and development of specific hardware, software or combinations for their own use and for sale to others. While they may not own or have a direct or constructive equity interest in the vendor (except in the case of applications software, which the Bell companies are already permitted to design and develop on their own), they may recover fully from the vendor their funding plus a reasonable rate of return over the life of the product. In fact, BellSouth could have provided capital to CXC or IMM on this basis.

The Consent Decree permits close interaction between the Bell companies and their manufacturers.

In addition to funding product design and development (see above), AT&T believes the Bell companies can work closely with manufacturers in other significant ways. During the hearing, Mr. Clendenin called BellSouth's claimed inability to interact closely with manufacturers under the Decree "the heart" of two-thirds of his testimony. But the Decree does not prohibit close interaction. Frequent consultation, feedback, modification of designs, testing and evaluation of products between the customer and manufacturer are essential throughout the manufacturing process. AT&T itself works on that basis with each of the Bell companies to ensure that at every step, it is developing and designing products that suit them. Because the Bell companies purchase the lion's share of equipment in the market, manufacturers have every incentive to satisfy their objectives.

Often the initiative comes from AT&T. At the beginning of the developmental cycle for new equipment, AT&T invites the local exchange companies to meet with it individually in focus groups, to describe what they need in capabilities and features. Once AT&T completes its developmental prospectus, it asks the Bell companies to review the prospectus and tell AT&T what changes they want. AT&T's account executives stay in constant communication with the Bell companies throughout. At any time in the entire process, the Bell companies may consult with AT&T to ensure that AT&T is on the right track.

But AT&T is just one of thousands of suppliers working with the Bell companies. Bellcore's January 1989 technical Digest reports that in January 1984, Bellcore had 2000 companies in its supplier database. By January 1989, the database had grown four and a half times, to 9000 suppliers. Bellcore also observed in its Digest that "The two-way communications that has been established between Bellcore and the telecommunications supplier community is one of the successes of divestiture." (Telecommunications Industry Association testimony at p. 15).

Regulation would not prevent competitive abuses from arising if the manufacturing injunction is lifted.

As manufacturers, the Bell companies could distort the competitive equipment markets in three separate ways: (1) by withholding or delaying information about the local networks that their competitors need to design new products; (2) by cross-subsidizing equipment manufacturing with ratepayer funds; and (3) by buying equipment from themselves, even though better or cheaper alternatives are available. (Tobias testimony at p. 4). These were the claimed abuses that led to the break-up of the Bell System (and the enjoining of the monopoly Bell companies) in the first place, and nothing significant has intervened to alter these incentives.

The Bell companies do not deny that these incentives exist. Rather, they claim that regulation can keep the markets fair and open, preventing a recurrence of past abuses. History shows clearly that it cannot. While regulation may be an adequate surrogate for competition on the monopoly side of telecommunications markets, it cannot effectively police the combination of essential monopoly facilities and related competitive businesses that the Bell companies seek to recreate.

This country has already tried this approach, and it did not work. The 1956 consent decree relied on regulation to ensure fair dealing and proper pricing by the Bell System. In the 1960s and 1970s, the FCC instituted proceeding after proceeding to assure that the Bell System's procurement practices were fair, that technical information was disclosed on time and completely, and that cross-subsidies would not occur. (Tobias testimony at p. 5). The result was that the FCC's dockets were often inconclusive, and the Bell System's customers and competitors were dissatisfied. They, and ultimately the government, laid siege in the commissions and the courts, challenging the Bell System's largely subjective decisions about where they placed their costs and how they treated their suppliers and would-be suppliers. (Even Digital Equipment warns that the Bell companies might self-deal and withhold information about their networks if allowed to fabricate equipment These risks also exist in the design and development stages, as the Court of Appeals has forcefully noted. U.S. v. Western Electric, No. 88-5050, slip op. at 10 (D.C. Cir. Feb. 2, 1990).

Regulations were written, but they did not stop the Bell System from choosing its affiliate (Western Electric) for over 90% of its needs. Other manufacturers did not have much of a chance. As a result, they had little incentive to develop new products that might have been better or cheaper than Western Electric's. Now, under the Decree, they do. The manufacturing market has become open and fully competitive in the six years since divestiture (Tobias testimony at pp. 9-10) because manufacturers are assured of a chance to sell their products based on their merits, to the former Bell System carriers.

At the hearing, Mr. Hollings remarked (and it is true) that AT&T often buys AT&T equipment for its network. Why, he asked, should the Bell companies be treated differently? The answer is that the Bell companies are absolute monopolies: each Bell company has 99.99% of the market in its service area. Because their customers are captive, the Bell companies would have every reason to self-deal if the injunction were lifted, even where better or cheaper products are available. By contrast, AT&T cannot afford to pass up products that are superior to its own. If AT&T's long distance service is not what its customers expect (because its equipment is not up to par) or if its prices are too high (because it has tried to pass on inflated equipment prices), AT&T's customers will react. They will quickly switch to MCI or Sprint or any of the many other long distance carriers today, and AT&T will be worse off. But not the Bell companies: they will keep the customer and the cross-subsidy both.

The FCC does not have the ability to prevent, or even discover, the kinds of cross-subsidies that lifting the injunction would invite. Mr. Clendenin opined, in answer to Mr. Breaux, that the FCC's recent audit of NYNEX Materials Enterprises illustrates how well the regulatory system works. Actually, it is an example of the serendipity of regulation. One of the problems with relying on audits is that the damage in the market may well have occurred by the time the audit discovers it. In this case, for instance, the audit covered the period back to 1984 -- a five year span. Regulators also must, because of limited resources, pick and choose what activities to pursue. Here, the FCC audit was spurred and aided by disclosures that former NYNEX employees made to the Boston Globe. But that kind of publicity is rare. What is more, the NYNEX Materials case was fairly straightforward. It did not raise the kinds of complex and insoluble regulatory issues that Bell company manufacturing would involve.

With only enough resources to audit each major phone company once every 16 years, according to a recent GAO estimate (Wall Street Journal, January 9, 1990 at A-1), it would be wrong to assume the FCC has the capacity to regulate Bell company manufacturing activities effectively, even if it had the tools. Benchmarks, which Mr. Clendenin pointed to, are of little use given the diversity of features and capabilities that make telecommunications equipment incomparable. Moreover, the FCC only has jurisdiction over some 30% of the Bell companies' costs. The other 70% are regulated by the state commissions, which have basic difficulties separating costs between jurisdictions. This just compounds the task of policing the inherently inallocable costs that Bell company manufacturing would involve. FCC member Andrew Barrett (a former Illinois Public Utility Commissioner) recently said that "I contend there's a distinct possibility that there's not a regulatory body in the country that would recognize a cross-subsidy if it smacked them in the face". (Communications Daily, March 5, 1990 at p. 1). Whether or not this is literally so, regulation would be an ineffective guard against the temptation the Bell companies would have to distort the competitive equipment market, if the manufacturing injunction were lifted.

STATEMENT OF THE NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS

This statement is submitted for the record of the Subcommittee on Communications of the Senate Committee on Commerce, Science and Transportation on behalf of the National Association of Regulatory Utility Commissioners (NARUC).

The NARUC is a quasi-governmental, nonprofit organization founded in 1889. Within our membership are the governmental agencies of the fifty States, the District of Columbia, Puerto Rico and the Virgin Islands which are engaged in the regulation of utilities and carriers. Our chief objective is to serve the consumer interest by seeking to improve the quality and effectiveness of government regulation in America.

The Association appreciates this opportunity to express its views on S. 1981, proposing the "Telecommunications Equipment Research and Manufacturing Competition Act of 1989". The policy of the Association on legislation to change the terms of the Modified Final Judgement is contained in the attached **Resolution on MFJ Relief** which outlines the types of regulatory tools State regulators would require to protect the interests of basic telephone service customers in the absence of the MFJ restrictions. However, the NARUC neither opposes nor supports lifting any of the MFJ restrictions.

From a State regulatory perspective, the primary risk of allowing Bell operating companies to manufacture telecommunications equipment (or, for that matter, to provide long distance or information services) is the potential increase in the price of basic monopoly telephone service. Diversified utilities such as the BOCs have a natural incentive to collect as much of the costs as possible of their unregulated businesses from the regulated ratebase which is funded by captive monopoly customers. Cross-subsidization can be as blatant as has been recently alleged in the NYNEX Materiel Enterprises case[1] or as subtle as transferring employees trained at ratepayers expense to a competitive unregulated affiliate. Telephone rates could also rise unfairly due to failed ventures into competitive markets or transfer of such profit-making enterprises as Yellow Pages from the regulated operating company to an unregulated affiliate.

Other factors contribute to State regulators' concern about MFJ relaxation, such as: the policy of some BOCs to pursue, on both the State and Federal levels, deregulatory approaches which significantly reduce regulated oversight of BOCs' regulated and unregulated costs; the guarantee by the Bell holding companies of the debt of their unregulated subsidiaries which could increase the cost of capital for their regulated telephone businesses; the efforts of some BOCs to restrict State regulators' access to accounting information; the level of oversight the Federal Communications Commission is able to provide to assure telephone ratepayers and competitors that its cost-allocation rules and procedures are properly controlling cross-subsidy; and the FCC's preemption of State regulation of enhanced services in its Computer III Order.[2]

---

[1] Order to Show Cause and Notice of Apparent Liability for Forfeitures In the Matter of New York Telephone Co., New England Telephone and Telegraph Co., FCC 90-57 (released February 8, 1990).

As this Subcommittee is aware, the Communications Act, through subsection 152(b), reserves authority over intrastate communications services and related matters to State regulators. This section reflects the historic division of telecommunications regulatory authority between the States and the FCC.[3] One of the NARUC's primary objectives is to protect this dual regulatory system by protecting the integrity of States' authority over intrastate telecommunications policies which must reflect the unique concerns of their respective jurisdictions. Relying on local regulation where at all feasible ensures greater responsiveness to consumer needs.

While not supporting any relaxation of the MFJ restrictions, the NARUC finds it essential that any legislation to do so explicitly protect the authority of State regulators to require any or all of the following: (1) the use of separate subsidiaries; (2) State access to accounting records of BOC affiliates; (3) State-determination of appropriate allocations of costs between regulated and unregulated BOC operations; (4) annual audits; (5) the allocation to new services of new costs to the telephone network not necessary for basic service and a contribution to the underlying network costs for economies of scope and scale; (6) State approval of BOC/affiliate purchase agreements, including a competitive bidding requirement for BOC contracts; (7) State approval of the sale by a BOC of its customer proprietary network information; (8) oversight of affiliate recourse credit arrangements against BOC assets; and (9) disallowance, in ratemaking proceedings, of any costs associated with increased cost of capital due to a failed competitive venture in which the BOC affiliate may have engaged. The NARUC also urges Congress to require that any network information, services, and telecommunications equipment sold by a BOC or a BOC affiliate to another affiliate must be made available to any other company on the same terms.

---

[2] Currently under appeal in the United States Court of Appeals for the Ninth Circuit in State of California v. FCC, No. 87-7230.

[3] Recently reiterated in Louisiana Public Service Commission v. FCC, 476 US 355, 106 S. Ct. 189 (1986).

Based on this policy, the NARUC's concerns with S. 1981 relate to the ability of States to regulate local telephone service in the public interest. The bill requires that any new manufacturing activity other than basic research must be conducted through a separate subsidiary from the BOC. Since BOC activities fall largely under the jurisdiction of State regulators, the NARUC urges the Congress to let the States decide what type of structure is needed to best protect ratepayers. Some States have found that separate subsidiaries may not be most effective because they tend to remove more activity from regulatory oversight than may be desirable.

In addition, Congress should state explicitly that the bill's requirement that the FCC issue certain regulations will not preempt States' authority to impose safeguards affecting the same business activities. The NARUC does not necessarily oppose the safeguards contained in S. 1981. We simply seek to ensure that they do not preempt State regulators from using the tools they find necessary to protect the ratepayers of local telephone service. The problem of FCC preemption is well documented. The FCC has sought to preempt State regulation of enhanced services, inside wire, depreciation rates, billing and collection and interconnection, to name a few. Clarification is needed to ensure that State regulators remain able to carry out their statutory mandates.

Thank you for your consideration. We look forward to working with the Subcommittee on this legislation.

○